

# MICHIGAN FARMER

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of AGRICULTURE.

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## Farm Department.

Conducted by J. H. Brown, who lives on his farm at Climax, Mich., which is conducted as the Michigan Farmer Experiment Farm. All correspondence for this department should be sent to Climax, Mich.

### THE EDITOR'S FARM NOTES.

#### BEES ON THE FARM.

Thinking you might be pleased to hear from one who, after reading Mr. Hilton's article, "Who Should Keep Bees," in January 23d issue of The Farmer, a year ago, and later on your article, "Bees on the Farm," decided to make a start in bee-keeping, I will write you of my success.

About May 1st I purchased of a neighbor a swarm of bees in an eight-frame dovetailed hive, for which I paid \$4.50. I then sent for an extra hive complete, 100 one-pound sections, one smoker, two pounds comb foundation, two supers, and Root's "A. B. C. of Bee Culture."

When the bees were well started gathering honey I put on a super of 24 one-pound sections. These were finished the 15th of July, and I had to remove it, as we have "four little folks" whose mouths had been watering for honey ever since the bees arrived.

Another super was put on at once, and when about two-thirds full a second super was placed under this. And later, in like manner, a third super under the two. The three were left on until some time in September, when every section was finished.

I think they would have filled another super had I put it on, but was afraid they would not store enough for winter, so I did not venture.

They finished in all 96 one-pound sections, but did not swarm until one night about the 20th of November, when they departed, hive and all. Boot tracks from the road to where the hive stood, and return, solved the mystery.

Thus ended my first experience in "bee-keeping," but will try again this spring with two or three swarms.

The experience of a neighbor who purchased a swarm at the same time has been somewhat different. His made but little honey and swarmed several times, some going away. He is wintering three swarms. Spring will tell which of us has been the more successful, or perhaps I should say, had the better "luck."

If others can get as much pleasure and profit from a swarm of bees as I have, they will never regret making the small investment, even if some rascal saves them the trouble of wintering.

Tuscola Co., Mich. W. T. LEWIS.  
(Several brother farmers tried an experiment in keeping bees last season for the first time, after reading over our suggestions, and a few of them had about as good success as you did—with the "nocturnal swarming" left out.

Possibly the "thing" who took your bees, hive and honey, wanted to experiment with stolen sweets. He may be conscience-smitten "one of these days," and return to you sixty or even one hundred fold more honey than he stole. At least, he ought to return the empty hive.

We did not keep any bees last season, simply because we had more work on hand than could be done with the limited help, and then we were ad-

vised by several brother farmers that it did not pay to fuss with them.

But really, is it very much work to care properly for a few swarms of bees? Of course, when the bees are swarming, one must be on hand to attend to them. As this period covers but a few days, even when several swarms are kept, we do not see any serious detriment to the farmer who is not rushed with work.

The principal objection to keeping a few swarms of bees is that there are only about three years out of five in which enough honey is made to be at all profitable. During the other two years what little honey is made goes to

last season's work of plowing, find any bees' nests on your farms, and have you noticed any decrease in the number of bees at work in the field, garden and among your flower beds? Another question: Have you tried keeping a swarm of bees on your farm, to furnish honey for your own family use, and does it pay? Let us have brief replies, and thoroughly ventilate the matter as it pertains to the practical farmer who makes no specialty of keeping bees.

In our case it may not pay to undertake to keep bees, as we could buy the honey at less cost than we could afford to fuss with the bees. But the trouble

neighbor's mill every day, and for weeks at a time it stands still. He couldn't say that of me if he was my neighbor.

I have never been out of water or ground feed, and, as our editor says, have my machinery so arranged that I never feel the want of wind, and enough goes to waste to do the work of a whole neighborhood.

As to cost, the first cost is much less than any kind of engine, and the after cost is almost nothing. The power is always in place, and, with plenty of oil, a mill will last almost a lifetime.

I send you a cut of my barn and the way it is arranged. The floor is sixteen feet wide, and the swing beam comes out four feet over the floor. The mast comes down to the beam, directly over the swing beam, so you see there is a space of four feet back and twelve feet in front of the machinery, leaving room to work on both sides, but is not in the way of loaded teams driving in on the barn floor.

The feed cutter, which is not shown in the cut, is placed on a scaffold even with the swing beam, and is run from the pulley next to the foot gear.

On the floor is a large bin holding enough cut stalks to last two or three weeks, and as they are cut they drop into this bin.

Now, if there is anyone who sees this article who is thinking of getting a power for farm use, let me say, get a geared windmill. Put it on your barn, and I am sure that you will be more than satisfied.

FRED M. LUTHER.

Ottawa Co., Mich.

(The arrangement of this mill and machinery is somewhat similar to our own. In reply to those correspondents who wish us to give a sketch of our plant, will state that a sketch will be made in the near future, accompanied by a full description.

We did some custom work a few days ago for one of our neighbors who is a regular reader of The Farmer. The ground feed was much finer than that ground at our local mill. To sum up the whole matter, our windmill power and mill machinery does well, and we are more and more pleased with it each day we set the machinery into motion.—Ed.)

For The Michigan Farmer.  
WORK ON THE FARM.

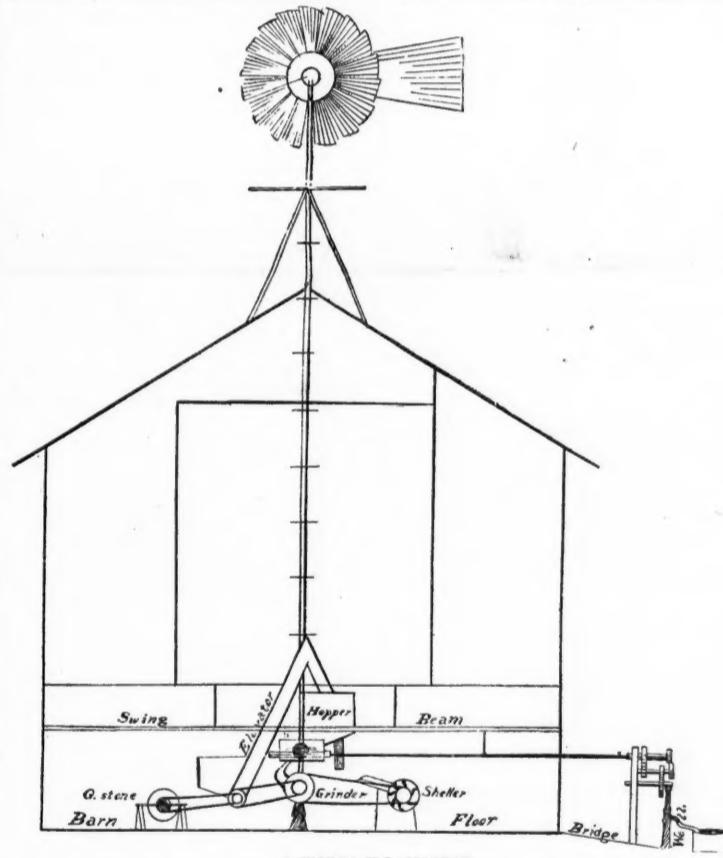
There seems to be no end to the work on a farm. March 24 we are in the midst of sugar making.

And while we are not making sugar, we are cutting sugar wood for next year, and stove wood for summer use, cleaning up tree-tops and sleeking up in general in the woods.

Then later on, and before plowing for corn begins, will come the usual job of fixing fences and cleaning up around the barn and fields. A good deal of this work we planned to do in the winter time, but the snow was so deep that it was almost impossible to get around through it. So it will have to be done in a much shorter time.

We have made us eight brood sow pens, six feet square, with a railing around on the inside to protect the young pigs from their mothers lying on them. These pens are placed in a row with a small yard for each pen.

It looks somewhat like a street in a "wild and woolly west" town, and at-



A WINDMILL OUTFIT.

support the bees through the cold winter months. Add to this the necessity of supplying artificial food, which must usually be purchased, and we find that some would-be bee-keepers become disgusted.

On the other hand, we think there is good reason for the keeping of bees on many farms where clover is grown. Since we referred to this matter one year ago several brother farmers have stated to us that they saw very few bumble bees last season, and not a single nest was plowed up while plowing wheat or oat stubble.

On our own farm, while plowing such stubble, we found but a single nest, whereas years ago we used to plow up from one to a dozen nests in a single day. When one understands how necessary and valuable insects are in the fertilization of clover, it behooves us to investigate the honey-bee from this standpoint also.

We would like to ask this question of our brother farmers: Did you, in

is, although we can buy honey when we need it, we seldom have it on hand when we want it.

For The Michigan Farmer.  
ANOTHER WINDMILL OUTFIT.

Last fall I was induced by one of your agents at the State Fair to take a trial subscription of your paper, and I can frankly say that I shall not do without it as long as I can get money enough to pay for it.

I have been especially interested in the articles on farm power. In your issue of November 20 E. S. Wilcox rather runs down geared mills for power, and when he does that he steps on my toes, and hard, too.

One year ago this fall I put a geared mill on my farm. It's all the power I have got and all that I want. It pumps all the water for my horses and cows; it cuts all of my corn fodder, shells all of my corn, grinds all of my feed; it elevates the grain to a hopper over the grinder all ready for grinding; it runs my grindstone, and gives me all the power, and more than I can use.

Mr. Wilcox says that he can see his

tracts considerable attention from passers-by. Some think they are chicken coops, while others can't guess what they are. The young pigs are due to commence arriving the third day of April.

There has been a great deal said in nearly all farm papers, the past few months, about sows eating their pigs, and it seems that there is a general feeling that salt pork is the remedy. I don't believe that our sows will need any pork this time, for they have had plenty of exercise, with nothing for some time but a ration of sugar beets, clover hay and pasture.

Since the snow went off they have had the run of a large clover field that we intend to plow up for corn. There is plenty of young, tender clover they can get, which, I think, will do them good.

Our clover seed was sown on an ideal "honey comb" surface, and nearly every seed seemed to bound into a crevice. I never sowed seed before when the conditions were so favorable. I had the seeder ready and I got up as soon as I could see and went at it.

I did not sow twelve acres before breakfast, as friend Terry did, but got over the ground at a good lively rate. I don't sow by stake, but by the rows of corn, taking eight rows at a round. When I don't have corn rows to follow I use the drill marks, thus avoiding the trouble of using stakes. I put on a bushel of seed to five or six acres, whether seed is cheap or dear.

We never had clover go through the winter in better shape. acres of clover I don't believe that a single stalk has started to heave by the frost. The heavy mulch that died down on it last fall completely protected it from heaving.

Wheat looks well and bids fair to be a good crop.

I. N. COWDREY.

(Since we commenced advocating the use of, and illustrated the chicken-coop pig pen" in The Farmer, more than a score of brother farmers have written us saying they had tried this style of a portable shelter and liked it very much.

We note that friend Cowdrey likes the shelter better with the floor detachable. Ours is fastened down so that a large sow cannot lift it up when fastened therein. The floor is also quickly detached by pulling a few nails.

Unfortunately for us we have not had any heavy freezes lately, so as to make a real honey-combed surface. We were in Clinton county last week, and found plenty of chances to sow seed on an ideal surface. No such heavy freezes in Kalamazoo county.—Ed.)

For The Michigan Farmer.  
THE USES OF SALT IN AGRICULTURE

At our farmers' institutes and horticultural meetings, the question has often arisen as to whether or no it is practical to use salt in the orchard.

I remember a fruit-grower in Mason county, whom we were once visiting, told us that he strewed salt under his plum trees so that the ground was quite white, and was troubled very little with curculio or other injurious insects.

Later the question of using salt in the orchard came up at one of our horticultural meetings, and I told of our friend's experience—when the remark was made that "he had better go slow" unless he wanted to get rid of his trees.

A lecturer before an association of English farmers once said that salt was one of the most important subjects that could be brought before an agricultural audience, and, as it is equally important for the American farmer, we will notice some of the points he made. He says, and we think rightfully, that the reason it is not more appreciated and more generally used, is because its chemical action on the soil is not clearly understood, and the great solvent powers of chloride in setting other substances free has been overlooked.

The use of salt as a manure began very early in the East, and was practiced by the Hebrews and Chinese many centuries before the Christian era. Lord Bacon, in the seventeenth century, recommended the use of salt and water for the land; and Sir Hugh Platt said that manure laid on barren ground would fail to enrich the same but for the salt present in it.

Before fixing the quantity of salt to be applied, the farmer should carefully consider the conditions of the soil, what manures have been previous-

ly used, and what crops have been raised. Sandy soils require more salt than rich, heavy, loamy soils. It is claimed that the solvent powers of sodium chloride are twenty times greater than those of rain water in setting free and breaking up the particles of the soil. An experiment made to test the relative solvent powers of rain water and of a solution of ten per cent of salt showed that while the rain water dissolved a total of 1,345 pounds of minerals, the salt solution dissolved 2,475 pounds.

In cereals there is a large preponderance of phosphorus in the form of phosphoric acid, amounting to nearly fifty per cent in wheat and oats, and nearly forty per cent in barley. In all roots there is a large preponderance of potash, in potatoes reaching nearly fifty per cent. In hay and clover the most important constituents are potash, lime and silica. The straw of cereals contains nearly half as much potash as grain, and a very large quantity of silica. This explains the necessity of a rotation of crops, as they do not take the same elements from the soil.

Barnyard manure is conceded to be the best and most powerful, for the reason that it gives back to the soil most of the substances that have been taken from it; yet in many instances it is thrown out in the yard to lie exposed for months to the weather. To the farmer who seems to find this a necessity, we would say, you may here find a very important place for the use of salt. If you sprinkle it regularly on the manure heap you will thereby fix the ammonia, which is the most valuable chemical for the land, and which would be lost unless means are used to prevent it; and manures mixed with salt are much more effective, besides being rid of millions of noxious vermin.

I think the authority referred to above would sustain the testimony of our Mason county friend, for he claims that salt will kill all kinds of worms, slugs and vermin, and especially the turnip fly, and the worm that does so much damage to the oats. It will also absorb moisture from the atmosphere and hold it in the soil.

Nitrate of soda requires about two hundredweight of salt to one hundredweight of nitrate before using, guano about half a hundredweight of salt to each hundredweight of guano, superphosphates from two to three hundredweight of salt per acre, or equal quantities of superphosphates and salt.

Oceana Co. J. M. W.

(We should be glad to hear from any brother farmer who has tried sowing salt on sandy loam soil. We never could see any material benefit in applications made on our soil, but shall test the matter again.

We doubt whether the salt has any material effect in fixing the ammonia escaping from the barnyard manure heap. We should prefer using land plaster or muck.—Ed.)

MORNING-GLORY AND THISTLES.

I notice in The Farmer of the 19th of March that Frank Leslie, of Ohio, is troubled with the wild morning-glory.

He says that the field that is infested with them has been in corn about 21 years. That kind of culture will tend to increase them. The continual plowing and working breaks the roots and drags them around, and new shoots will spring up from every place.

But they are easily gotten rid of, if rightly managed. They are a persistent grower on soft, cultivated land. Now, if Mr. Leslie will allow his hogs (without rings in their noses) access to them a year or two, they will root them all out and eat the roots and thrive on them. Or if he will seed down the part infested with the vine and keep sheep on it a year or two, they will kill them all out by eating them off as fast as they come up.

I would inclose the part, and by treating it in this way he will get rid of them easily. I have got rid of two or three patches in this way.

Canada thistles can be killed by continually cutting them a year or two as fast as they come out of the ground.

Jackson Co., Mich. G. S. TEFFT.

Friend Tefft's treatment is a good one. It is bad to keep digging up the ground which contains the roots of this pest.

In this connection, and because we have several communications on our desk, asking how to exterminate Canada thistles, we suggest that the unfortunate possessors of such thistles wage a relentless warfare on them during the coming season.

As many of us have stated in these columns during the last two years, no plant can live if the roots are cut off just under the surface and the remainder of the roots not disturbed. The surface trimming must be kept up all through the growing season.

A few farmers tell us they do not believe Canada thistles can be killed by depriving them of air and light. To such we suggest that a "trial plot" in some thistle patch be selected early this spring, and a course of treatment administered. In a small patch a hand hoe could be utilized, but for field treatment nothing is better than broad sweeps in place of cultivator teeth.

THE GANG PLOW.

Another good tool for this work, in fields managed by summer fallowing, is the gang plow. We saw one a few days ago that just suited us for this business. With this tool one can subdue almost any kind of sod in preparing a seed bed for wheat in the fall.

The tool has either three or four small but broad plow bottoms, and is easily handled for shallow, but effective, cross plowing.

For The Michigan Farmer.  
SOME POTATO EXPERIENCE.

I guess I have read every number of your valuable paper for eight years. Have been much interested in many articles therein concerning the raising of potatoes.

About five years ago I decided to make an experiment myself. I found, after a long search, a few potato balls, saved the seed and planted them.

The first year I had a large variety of all shapes of worthless roots, but have culled them each year, and last year I raised from one of the varieties at the rate of 380 bushels per acre, and from another variety 338 bushels per acre, each as good potatoes as one ever found to eat.

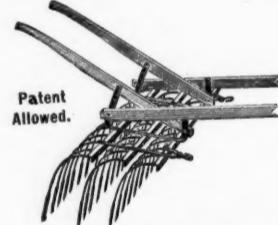
Wayne Co., Mich. C. C. MILLS.

I should be glad to know if any one can beat this.

(For one who has the time and is interested in potato culture, such experiments are recommended; and sometimes wonderful results are obtained, with the attendant financial benefits.—Ed.)

#### An Implement You Should Have.

For three years we have been watching the progress of the spring tooth weeder that have been put upon the market. From the first we pronounced them the most valuable agricultural implement added in the last half of the nineteenth century, and with the improvements that have been so quickly made upon the original form we are compelled to admit that these weeder as to-day sent out by D. Y. Hallcock & Son, York, Pa., have far surpassed our expectations.



We know personally many farmers who used these weeder last year and regret that lack of space prevents us from reproducing some of the many letters we have seen commanding them. Here is a sample letter:

DIME, ARMSTRONG Co., Pa. Feb. 17, 1898.

MESSRS. D. Y. HALLOCK & SON, YORK, PA.

DEAR SIRS:—I bought a weeder from you last season which gave the best satisfaction of any tool I ever used. I worked a ten-acre field of corn with it into which I never put another tool, and it was the cleanest field of corn I ever raised.

Yours truly, J. J. REARICK.

If you have not done so, write to-day to D. Y. Hallcock & Son, Box 801, York, Pa.



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Address all correspondence to MICHIGAN FARMER  
Detroit, Mich.For The Michigan Farmer.  
A REPLY TO E. H., OF INGHAM  
COUNTY.

If E. H., of Ingham Co., who wrote the article on "Dairy Cattle Against Shorthorns" in your issue of March 26th, will carefully re-read my article in your issue of Feb. 19th he will find that he is mistaken in his assertion that I claimed Shorthorns were the only cattle for Michigan, and that I nearly claimed them to be the only dairy cow.

Such were not my intentions, and I do not think any fair-minded reader would construe the article in question in that light. My article was written in reply to a former article in your columns on "Guernseys at the World's Fair," which contained some statements which were misleading as to the position occupied by the Shorthorns in the dairy tests at the World's Fair in 1893, as I fully explained in the beginning of my article. The only thing which could possibly lead anyone to the conclusions arrived at by E. H. was the heading, "The Shorthorns on Top," and for this I am not responsible, as the heading was furnished by the department editor.

Every statement made in my article can be proved by the records of the World's Fair dairy tests, records which are indisputable, as they were public records made under the direction and inspection of a committee selected for that purpose. This committee contained representatives of the three breeds which were competing. I depended entirely upon public records, of which there can be no dispute, and not upon alleged phenomenal records made behind the breeders' barn doors, as is so often the case with breeders of the special purpose dairy breeds.

I will not attempt to defend Mr. Hinds' article. He is able to defend it himself in a far more capable manner than I could do. It is sufficient for me to say that every statement in his article regarding dairy records can be proved from these same World's Fair records. I presume E. H. is ignorant of the fact that Mr. Hinds had charge of the Shorthorn cows at the World's Fair, and is in a position to know what he is talking about. It is due to his zeal and energy that the Shorthorns were enabled to make the magnificent showing which surprised even their most sanguine friends and so galls the breeders of the special purpose dairy breeds.

I never have claimed, and do not claim now, that Shorthorns are the only cattle for Michigan, or any other locality. Circumstances alter cases, and what would prove profitable for one man would not be profitable for another. Men must select the breed of cattle best suited to their purpose. If butter alone is wanted I would say take the Jersey or Guernsey; if milk alone is the object, the Holstein; for beef alone, the Hereford, Galloway or Aberdeen Angus; but for the general farmer, who wants to raise some good stock and at the same time produce a fair supply of milk and butter of good quality, there never has been, nor do I believe there ever will be, a breed of cattle which can equal the Shorthorn when bred as a general purpose animal.

While I do not claim that the highest point of excellence can be attained in both directions in the same animal, yet I do claim that the two qualities can be so combined as to produce an animal which will prove profitable to its owner.

The editor of this department, and hundreds of the readers of The Michigan Farmer, can bear testimony to the assertion that ten or fifteen years ago there were hundreds of good grade Shorthorn cows in Michigan that were capable of raising stock that would pay in the feed lot, and at the same time produce a profitable supply of milk and butter for use in the household, or to place upon the market. But since the owners of these grade Shorthorns began to mongrelize their herds by breeding to bulls of the special purpose dairy breeds, it is hard to find a carload of good feeding steers in any one locality. That the owners of such herds are realizing their mistake is attested by the phenomenal demand for Shorthorn bulls of the general purpose type at the present time.

The fault of rushing from one extreme to the other is one which is peculiar to the American people, and I would say, in unison with the editor

and E. H., if you have a class of stock that is paying you, stick to them until you can close them out at a profit. I believe in fairness and justice to all, and because I am an ardent admirer of one class of stock, it is not a sign that I can see no good in any others.

If E. H. will spend time to visit our place I think I can convince him that the claims I have made for the general purpose animal are well founded.

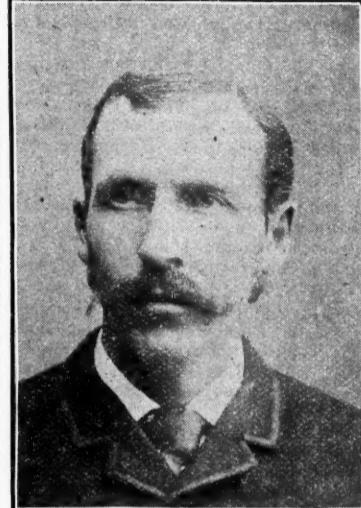
FREEMAN J. FISHBECK.

Livingston County, Mich.

## MICHIGAN'S LIVE STOCK.

## NOTED MEN INTERESTED IN ITS IMPROVEMENT.

Continuing the sketches of the presidents of the various live stock organizations in this State, we present a portrait of L. W. Barnes, of Byron, Shiawassee



county, President of the State Swine Breeders' Association. "Lou" is one of the old reliable, who never misses the stock meetings, and always puts in an appearance at the State Fair.

Mr. Barnes was born February 10, 1852, on the farm settled by his father, Ezra D. Barnes, in the spring of 1836, four miles southwest of the village of Byron, Shiawassee county, and where he lived until 1896, when he moved to a farm one and a half miles south of Byron, settled by his wife's father, Mr. Isaac Barnum, at a very early day.

In 1875 Mr. Barnes began, in a small way, the breeding of Poland-China swine. About three years later he formed a partnership with his brother Oscar, under the firm name of L. W. & O. Barnes, and began making a specialty of the breeding of American Merino sheep and Poland-China swine. Stock from this flock and herd have found their way into all parts of Michigan as well as into nearly every state in the Union and into Canada. Several selections have also been made from this flock of Merinos for export to Australia and South America. A few years later some attention was given to the breeding of Shorthorn cattle, and a small herd of fine quality was got together. It was thought best, however, to drop the cattle and give their entire attention to the sheep and swine. A closing-out sale was held June 1, 1887, and fairly good prices were obtained.

In March, 1891, his brother Oscar was killed by an accident, and for a time this shock almost discouraged Mr. Barnes in keeping up the business of breeding improved stock for the farm; but he could not think of giving up what seemed to him his life's work, and he is still giving it as much study and attention now as ever, and we hope will for many years to come.

Mr. Barnes was one of the original members of the Michigan Merino Sheep Breeders' Association, and has attended all its meetings, and a great portion of the time been a member of the executive committee. He is also a member of the executive committee of the State Agricultural Society, and has been for a number of years. A more faithful official than Mr. Barnes it would be hard to find, and he enjoys the respect and confidence of his fellow breeders, friends and neighbors to a marked degree.

For the Michigan Farmer.

## SALT FOR BROOD SOWS.

In issue of Michigan Farmer for March 19th, I notice an article bearing on this subject, and on account of several things that have come to my knowledge in regard to using salt for hogs, I feel that I should write this. The advice given there will doubtless send several sows to "Kingdom Come,"

for the reason that many farmers will have aggravated cases of sows eating their pigs, and will argue that if a little salt is good, more will be better, and enough will be given to kill the sows almost instantly. A limited quantity will not injure a sow, but too much acts as poison. If a sow has salt constantly in reach she will not eat too much, or if it is mixed with a larger quantity of wood ashes she will not eat too much. While salt is an aid to digestion, it cannot be regarded as a cathartic. Had the writer credited his late success to the bran feeding rather than the salt, he would have been nearer right. The best way to salt hogs is to gradually get them accustomed to it and then keep it by them all the time mixed with wood ashes. In more than a quarter of a century's experience with brood sows, I have never had a sow kill and eat her pigs, simply because I am careful not to allow them to be constipated at that time. I have never fed fat meat; bran and middlings are better, or pasture or clover hay or roots. If sows are not accustomed to salt, be very careful not to give them too much.

I have six large strong sows yet to farrow and I doubt if any of them will eat a dead pig if found in the nest at farrowing time.

Ross Co., Ohio. JOHN M. JAMISON.

HOW THE GOAT IS UTILIZED  
ABROAD.

From our Paris Correspondent.

The goat has been not inaptly termed the poor man's cow; it is easily fed, and thrives in certain districts—upper hill slopes where sheep and cows are impossible. In Paris and the large provincial towns, the milk sells twice as dear as that of the cow; the milk is readily made into excellent cheese, and the butter has the reputation of fortifying the system. The flesh of the goat is not delicate, and is only eaten by the very poor; kid, of course, is as popular, and much cheaper than lamb. The European goat is said to have had its cradle in the Alps. It can be easily reared on mountain sides. It is a larger animal than that peculiar to Asia and Africa. The Asiatic goat has no beard, often no horns, and is not a good milker. But in Angora, Cashmere, and Thibet, it is prized for its undercoat of fine hair or down, with which the celebrated Cashmere shawls are made. It is not a good milker, but is gentle, and soon becomes a pet with families. Its milk is not strong flavored. The African goat is a good milker in its own climate; the Malta variety is the best, due it is said to the influence of the sea. It yields between three and four quarts of milk daily. The French prefer the Alpine goat; it is roped and fed on pasture and stands the outside well, if protected from wind; the animal likes plenty of air. In the Lyone Mont d'Or, the goat is house fed all the year; it eats every kind of mess, and mixtures are made of vegetables with even kitchen hash. The goats are milked three times a day, and the yield on the whole is about two quarts. Its milk makes capital cheese, which has a most fortifying and restorative effect upon debilitated constitutions. It was a goat, Amaltheus, which reared Jupiter. Goats' cheese is made in the form of a pyramid, weighs 4 to 5 ounces, and costs half a franc. Goats' milk imparts vivacity even to sickly children.

## STOCK NOTES.

A report from Montana says the sheep men of that state have been trying and successfully, too, to avoid paying taxes on their herds by moving them to Idaho, and back to Montana, all the time claiming that they were sheep in transit and not subject to taxation. The supreme court of Wyoming has decided that such sheep are subject to taxation whenever found in the state.

Here is an Iowa swine-breeder's opinion of the cause of hog cholera: "Hog cholera is, in my judgment, a result of improper feed and care. Permanent hogpens are an abomination on the farm. It is difficult to get sunlight into them. The floors and soil underneath become foul and unhealthy. Yards adjacent must be used continually, and they become undesirable for swine. There is also waste of fertility by the use of permanent buildings. I use portable pens for sleeping purposes; also portable feeding floors. Move pens to pasture in summer; back to feeding pens in winter; to new pastures next season. Keep up a rotation of fertility and save hogpens and have healthy quarters at all times."

The English say that the best mutton in the world is produced by the use of a Southdown ram with a Merino

ewe, and their butchers claim they not only give the finest quality of meat, but have the smallest percentage of offal and a desirable lightness of bone. With these sheep there is a certainty that their good qualities will in a great measure be transmitted to their offspring. The above extract is taken from a stock journal. We would like to inquire how Englishmen are enabled to test this cross. There is but one Merino flock in England, kept as a curiosity. We have no doubt but that the cross is an excellent one, but it will have to be tested in Australia, South America or the United States, as Merino ewes are not available in Great Britain, or even in Canada.

Mr. J. H. Banghart, of Lansing, in a private note, says: "My stock is in fine condition—no sick hogs hereabouts. I own a young sow that has always been too fat; at least I have been told so very many times by my friends and brother breeders. She will be two years old the 28th of next month, and weighs over 500 pounds. She is hungry always—a regular hog. She has farrowed thirty-five pigs to date; three litters. I don't know how I can get her in proper condition—that is, not too fat." Mr. Banghart is inclined to be a little sarcastic. However, if that Duroc-Jersey sow keeps up her breeding record, the question of whether she is too fat or not need not be discussed. She is evidently in good shape for profit to her owner.

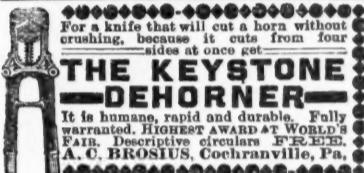
## Cures Side Bones and Splints.

Wales, N. Y., Aug. 1, 1897.

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## The Horse.

CONDUCTED BY ROBERT GIBBONS,  
Address all correspondence to MICHIGAN FARMER  
Detroit, Mich.

### COLIC IN HORSES.

The spring of the year is a time when colic is frequent among farm horses. This comes from the fact that there is always more or less change in the feed given and the work required of the animal, as well as frequent changes of temperature. These changes result in more or less disorder of the digestive system, and flatulent, or windy colic, a totally different disease from nervous colic, naturally follows. The small stomach of the horse renders the animal peculiarly sensitive to digestive derangements, and in changing its feed or amount of service required, such derangements should be carefully guarded against by not making them too radical. Changes should be made gradually that the animal's system may become accustomed to them by degrees. The losses from colic are probably much greater than from any other form of disease, and some authorities claim them to be greater than from all other diseases combined. In a recent lecture before a farmers' institute in Utah, Dr. Fischer, of the Utah State Agricultural College, gave a description of the various causes of colic, and gave the treatment he had found most successful in combating the disease. From what he said we take the following extracts:

According to European statistics, covering from 10 to 25 years, and records of from 1,000 to 1,600 horses at various veterinary colleges, out of every hundred deaths of horses 75 are caused by colic. In Bavaria, where they have official records of 40,000 horses, 10 per cent., or 40,000 of them, have colic every year and 30,000 die. The first cause of the frequency of this disease is that the horse cannot vomit, and therefore he demands great care in feeding. Another cause is catching cold by exposure to cold draughts when heated, or by carelessness in damp weather; feeding frosted or frozen fodder; drinking ice water when warm or unused to it. Overfeeding when unusually hungry, or when food is changed to something he greatly relishes, or by giving more than he can digest when not at work on Sundays or holidays, by feeding indigestible food, by feeding chop feed cut too short, or grain ground too fine, green oats or hay, raw potatoes, etc.; hitching up right after a heavy feed and driving hard; imperfect mastication, caused by poor teeth, etc.

Spoiled, rotten, damaged, or tainted food of any kind, sandy, betrodden hay, or hay from low, marshy fields, damp straw covered with fungi, mouldy oats, distilling slops, dirty, turbid water containing foreign matters, may cause it, and it may come from gas formation in the stomach, from feeding young or wilted clover, lucerne, esparto, buckwheat, withered or fermenting grass, sprouting grain or fresh grain of any kind. Cribbers sometimes swallow such quantities of air as to produce colic.

Accumulation of food matters in the intestines. This occurs in cases of catarrh in the intestines, or during long periods of rest after being fed on bulky food like straw, or some of the coarse, woody fodders, or on dry and tasteless food, like flour, bran, and middlings in undue quantities.

Stones and concrements in the intestines, caused by sandy or earthy fodders, or by bran in undue quantities. Most frequent in horses kept by millers and bakers in cities.

Worms in the intestinal tract, especially when they are so numerous as to become bunched and knotted together.

Intestinal stenosis, dislocations, twistings, invaginations, incarcerations, etc.

Prolonged starvation—starvation colic—common in war horses.

In some cases rolling of the animals, and consequent dislocation of the intestines.

It may also be brought about by catarrhs, inflammations of various kinds, ulcers and poisoning.

Another cause, and the most important of all, is the presence in the posterior aorta and anterior mesenteric arteries, in 95 per cent of our horses, of a parasitic worm, a round worm, the larva of which may be swallowed in the drinking water, and passing from the intestines, bore holes through the walls into a blood vessel, and from

there pass up into the arteries mentioned above. There they cause blood clots, which may be detached by any irregularity like those named above, and these clogging the smaller blood vessels disturb the circulation in the intestines, and colic results from a cause that would have but little effect if the worm had not been there.

The Doctor gave as rules for preventing colic: First, give your horse wholesome food, feed regularly, and according to the work the horse does, feed less and different food when the work is light, or when they rest on Sundays. Don't expose your horses to draughts of cold air, especially when the body is in a heated condition. Be careful in watering horses. Water regularly, and never give ice water to a horse accustomed to have it tempered. Give only pure water, and avoid the danger of the worm spoken of as in the arteries. Take care of the manure, because it is an excellent fertilizer, but water contaminated with it in any way is a dangerous thing for the horse.

He gave some of the most common symptoms of colic. Horses at work take short, stiff steps, sway from side to side at the hind quarters, stop suddenly, become restless, stamp with their feet, shake themselves, try to lie down, etc. In the stable they seem ill at ease, refuse food and drink, and stand back from the manger, step back and forth, groan, kick their bellies, look back at their flanks, switch their tails, bend their forelegs, arch their back, stretch their head and neck, and place their hind feet under their bodies. Now and then they lie down very carefully, or only make an attempt and give it up. In other cases they lie down suddenly and carelessly, roll around on their back, and kick into the air, after drawing the legs close to the body.

Another and frequent symptom is the desire to urinate, which is not to be regarded as a symptom of urinary trouble. Other symptoms are, some parts of the body very warm, and others cold and chilly. Often profuse perspiration at the base of the ears, side of the neck and chest in the flank, etc. These places may be cold or hot. Sometimes the sweat runs down in drops, or even in an actual stream from the body. The mouth is sometimes dry and hot and red, sometimes cold and pale. Belly and flank may be enormously swollen by gases. No dung is passed, or it is dry and hard. Urine is passed in slight quantities and often, and may be very light or very dark in color. The animal breathes rapidly and hard. The pulse is lightly increased at first, but later on becomes more rapid, and may go to 50 or 60, or even to 80, 100, or more per minute, and the horse seems to see and hear less perfectly than usual. As a rule, these symptoms last but a short time, half an hour or a few hours, seldom longer than 24 to 36 hours, before the animal dies or recovers.

For treatment he advises first an injection of a few gallons of clear water, of the temperature of the room. Give a cathartic pill made of five drams powdered Barbadoes aloes, one dram mercurous chloride, and enough powdered marshmallow root or linseed meal to make a stiff pill when a little water is added. After such a dose is given the animal should not be worked or severely exercised for 24 hours. Rubbing the belly and flanks with a wisp of hay or straw, or a gunny sack, especially when the animal is chilled, is a highly commendable treatment. A common treatment is to exercise a horse by walking or trotting. This is to be condemned.

One of the hearers said he had used cream of tartar, opening the mouth and putting a teaspoonful on the tongue, and in 15 or 20 minutes the horse would go to work. Another had taken horses considered dead or no better than dead, and by taking a double blanket and wringing it out in hot water, and wrapping it around the loins and over the back, and covering the horse up in it, it was pretty sure to save the animal. This Dr. Fischer thought a very rational treatment.

### HORSE GOSSIP.

The Chicago market furnished 512 horses for export last week. They went to various European countries.

Hamburg is to be tried a little in the early meetings, and if found all right will be shipped to England and raced there.

Nearly 2,000 patents are said to have been issued for improvement in horse-

shoes, but not one of them has ever come into general use.

Venezuela, South America, has doubled the former tariff duty on horses. She proposes to breed all required by her people at home.

From the weights placed on American horses by the English handicappers, it is apparent that their racing abilities are regarded with great respect.

It is stated that a contract has been made with a horse company in the Black Hills country for 2,000 head of cavalry horses for the United States government.

The National Horse-Breeders, Dealers and Exhibition Association was organized in Chicago on Wednesday of last week. The purpose of the Association is said to be the encouragement of the breeding of draft and coach horses, and to prevent indiscriminate breeding. Michigan was not represented at the meeting.

The auction sales of trotting horses this spring, at the East and in Kentucky, give emphasis to the statement that mere speed, without those qualities which make the animal useful for other purposes, is about as cheap a thing as there is in the market. The hammer-headed, long-backed, cat-hammed, nodescript, capable of trotting or pacing below 2:20, is as unsalable as a range scrub, and brings but little more at public sale.

Speaking of the quality of imported horses an English journal remarks: "The American horse is a sound, hardy, constitutional animal, and fairly well bred; the Canadian is somewhat softer and bigger, but, on the whole, a useful animal; the Argentine on the other hand, can lay little claim to refined pedigree; he is small and wiry, capable of plenty of work, and a good weight carrier, but is usually disfigured by the huge firebrand marks of his native estancia. We may safely assume from the market returns that the price of the general run of these horses range anywhere between 25 and 50 guineas, and frequently reach above three figures, and that the demand for them is increasing. Of this there can be no doubt, if the notices of sales are any criterion to judge by."

H. H., of Chelsea, sends the following query: "Please let me know through The Farmer whether there is something to feed to a horse to make him quiet and lazy—a horse that is too high tempered and nervous by spells. Also, is it a good plan to feed a horse a teaspoonful of equal parts of salt and ashes once a day?" We have never heard of anything which could be safely fed to a horse which would make him quiet and lazy. The remedy generally relied upon is to shorten up on his grain ration and give more exercise or work. Feeding ashes and salt is frequently done when a horse's digestive organs are out of order. A horse does not require medicine when he is well, and none should be given him until he requires it.

In view of the active efforts of Secretary Wilson, of the department of agriculture, to stimulate the export trade in horses of the United States, and the success which has attended such efforts thus early, breeders of Canada are bestirring themselves in a like direction. At the annual meeting of the Canadian Horse-Breeders' Association, at Toronto, it was resolved: "That in view of the fact that the foreign horse trade of the Dominion for the last two years has shown a falling off, whereas that of the United States has increased, and that the government of that country is making strenuous attempts to further the improvement, we do petition the government at Ottawa to appoint a commission of inquiry as to the best steps to be taken to develop the trade in horses with foreign countries, and to encourage the breeding of the same."

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**French Coachers or Percherons.**

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## Sheep and Wool.

CONDUCTED BY ROBERT GIBBONS,  
Address all correspondence to MICHIGAN FARMER,  
Detroit, Mich.

### WHAT BREED SHOULD HE USE?

To the Editor of The Michigan Farmer.  
What breed of sheep is considered best for rough pasture, such as browses in timbered land, on newly broken brush lots, fence corners, etc. Which does best? Does the Merino do as well as far south as southern Tennessee see the down breeds?

What grasses are best adapted to calcareous soils, both for hay and pasture?

What and where is there an agricultural paper printed, of sound principles, suitable for this state?

TENNESSEE.

For conditions described by our correspondent we should certainly recommend good grade Merinos, selecting them of good size and with good length of staple, as the fleece will be their most valuable characteristic.

If, however, he wishes to make mutton, instead of wool, the principal part of the income from his flock, then breed such ewes as are mentioned above to a good Shropshire or Hampshire ram, and see that the ewes and their lambs have a good grain ration as well as the browse and grass they can pick up in a wood pasture or on brush lots. To grow mutton sheep quickly, and that is one of the great elements of profit in raising them, they must have good pastures and generous grain rations. Meat cannot be grown from nothing.

The Merino is a native of a warm climate, and especially adapted to warm, dry sections, where pastures are apt to be scanty. The Shropshire should also do well there if properly handled.

The question of grasses for your locality is one we would not be justified in advising upon, as you probably have conditions and soils entirely distinct from anything in this latitude.

We have always had the impression that blue grass was indigenous to most parts of Tennessee, especially where limestone prevails. If so, the question of pastures is settled by that fact, as you can get nothing superior to a good blue grass pasture for either cattle, sheep or horses. For hay, probably a mixture of timothy and red clover would do well if blue grass does, and there can be nothing better where these can be grown. But the safest way is to watch what grasses other farmers in the neighborhood who have succeeded with sheep, rely upon. They are nearly certain to have selected the varieties best suited for their requirements, and which succeed best in that locality. Timothy, clover and blue grass are adapted to calcareous soils, the former doing best where there is an abundance of moisture.

We do not know of an agricultural paper printed in Tennessee. If there is not, perhaps the Southern Farm Magazine, printed at Baltimore, Md., and devoted entirely to Southern agriculture, would be a help. It appears to be well edited, and discusses all questions with fairness.

For the Michigan Farmer.

### RAISING HOT-HOUSE LAMBS.

In central and western New York many farmers make a business of raising hot-house, or early, lambs. They find in it good pay for their winter's work. Thinking some of our farmers might like to undertake it, I have made some inquiries as to the way to begin and management generally.

Merinos and Merino grades are preferred for breeding ewes. Shropshire, Dorset or long-wooled rams are used. Many so-called Michigan ewes are bought every spring on the Buffalo markets by early lamb raisers. These sheep have presumably had no lambs that season, and when fetched to their new home, from the discomfort of the journeying, are found to breed readily at the season desired, which is from July 1 on.

The farmers plan growing cheap fodder and lots of it for the sheep. Clover and corn are depended upon to furnish the great bulk of the feed. Roots and bran complete the ration, and are fed liberally to the nursing ewes. Indeed the emphasis is upon quick development of the lambs, so the ewes within a few days from weaning are given such feed as would stimulate a cow to do her best at milk giving. For the

time being the farmer is running a "sheep dairy," as Prof. Roberts calls it.

Some feeders arrange the pens so that the lambs may get to a trough by themselves, where they are fed as much grain as they will take; a little sugar used at first teaches them to eat the grain. The lambs must be fat, for when eight to ten weeks old they should weigh from forty-five to fifty pounds—live. They are then ready to market.

Hot-house lambs are "hog-dressed," though, for this state, feet and head must be removed. Especial skill is required to make the carcasses exceedingly attractive. They are to sell by the piece, and, if strictly first class, will fetch from \$6 up, according to the season, in the New York city market. Spreaders are used, and over them the caul is stretched to protect the carcass and to advertise its fatness. After thorough cooling, the carcass is wrapped in linen, then in burlap, and is ready for the express car.

In the early-lamb section the railway provides a special car that the lambs may be hung in, so they arrive at market in the pink of condition.

The farmer whom I called on had been in the business many years. He keeps his sheep in the basement of his barn, but it must not be inferred that this is a cellar. His barn is upon a side hill, so that at one end he has his root cellar, and the rest of the basement is available for sheep, cattle and hogs. This man owns 120 acres of land, with heavy soil. He aims to keep about 150 sheep and six brood sows. The shelter he gives his sheep is not better than that which our Michigan sheep sheds would afford were they provided with windows enough to light them, and the walls doubled and stuffed with straw, care being taken to have the loft also stuffed with straw. Of course the sheep are kept in their pens all winter. My informant each spring fattens such ewes as show a tendency to lay on too much flesh, and buys others to replace them.

H. B. CANNON.

### MUTTON CHOPS.

From Our Special English Correspondent.  
If the raising of sheep is conducted with intelligence and judgment there need be no failure.

Better a small flock of the best sheep to start with than a large flock of poorer ones, or a bargain in sheep not right in every way.

Sheep grow and mature quickly, cost but little to raise, and while adding materially to the fertility of the farm, pay "dividends" oftener than any other live stock.

It should be remembered that an animal in poor condition is much more liable to attacks of scours than one which is more robust and healthy.

"The poor ye have always with you," said the Great Master; I wonder if it is not so with the sheep ticks?

Every flockmaster who fails to dip his sheep does not thoroughly understand his business. If you would have a healthy flock do not fail to dip the sheep.

The weight of the fleece, and, to some extent, the quality of the wool, is determined by the care and attention paid to the sheep in regularity of feeding and quality and diversity of their feed. A break in the attentions thus accorded causes a break or weak part in the staple and impairs its value necessarily.

It is no trouble to attend to a flock of sheep, whether large or small, if one only makes up his mind to do it, and do it regularly and all the time.

Diarrhoea is generally a sign of weakness and poverty, incestuously-bred lambs being subject to attacks of this disease to an alarming extent sometimes, and it is thought by some excellent authorities on the sheep that the lambs which have been bred to a ram which is permitted to waste his energy in a large flock of sheep in useless service are easy victims to this disease.

In selling animals for breeders it is always best to keep within bounds in all statements and see that the facts sustain all representations made. In other words, sell so that you can sell again to the same customer when he wants to buy.

In judging of wool as to its fineness, commence at the shoulders, as there the finest wool is always to be found. This may be taken as a standard and compared with that from the ribs, thigh and rump, and the nearer the wool from these various portions of the animal approaches this standard, the better the fleece is.

Young and uniformly well woolled

sheep are necessary to grow heavy fleeces of good merchantable wool.

In the keeping of sheep care should always be taken to breed, feed and manage so as to improve each year. It is only in this way that the quality can be gradually improved. Like all other stock it requires careful work to build up, but a very little carelessness will soon bring it down.

There is this fact that must always be considered, and that is, in nearly all cases the better the quality of the product the better the price it will bring, and the more readily it will sell; so that we can increase the cost safely in nearly all cases if at the same time we are able to improve the quality of the produce.

Wool is the farm produce that brings the most money in proportion to what it takes from the farm, with the least labor and trouble to the producer.

With sheep we have three opportunities for profit, or, rather, of income, and all reasonable care should be taken to utilize them to the best advantage. Breed, feed and care for the sheep so as to grow the best fleeces of wool, secure the best and most healthy lambs, with a good carcass of mutton, and the more fully this is done the better will be the opportunity for profit.

A cheap ram at the head of the flock may handicap the whole situation. An old or feeble ewe lessens the chances of profit to a desperate per cent. It is a little thing to nurse a poor sheep through the winter at the expense of a lamb, a fleece, a deal of patience and a food supply that would have kept a strong, vigorous sheep that would have given eight pounds of clean, shafty, sound wool and raise one or two valuable lambs.

One of the most essential conditions that I know of in the growing of a good fleece of wool is the keeping of the sheep in a good condition all through the year, and whenever there is a falling off in condition the staple is affected.

### FLOCKS AND FLEECES.

In 1890 dogs killed 60,000 sheep in the United States, according to the U. S. census; but these figures only include the number reported. Undoubtedly many thousands more were killed, and never reported. The Southern states are the worst sufferers in this respect, but there are too many killed in Michigan.

H. A. Daniells, of Tuscola County, writes: "Two of my Lincoln lambs weighed each exactly 13½ lbs. at birth. Never had as large, strong lambs as now, notwithstanding I have fed one-half cull beans and one-half bran till Feb. 1st, and then corn, oats and bran equal parts. The call for Lincoln rams is simply unprecedented so early in the year. I could have sold two cars if I had them."

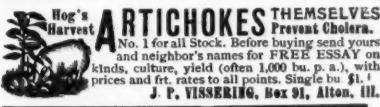
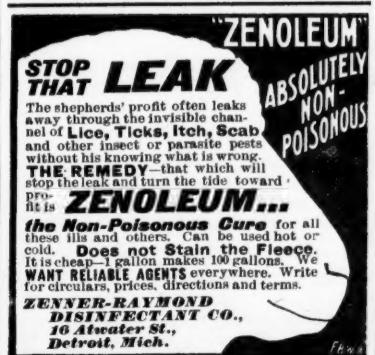


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SKABCURA DIP CO., Chicago.



### BREEDERS' DIRECTORY.

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FOR SALE. Two Shorthorn Bulls, 11 months old, color red, in good condition. H. C. RICHARDSON, Sandstone, Jackson Co., Mich.

CLOVER BLOSSOM FARM ABERDEEN-ANGUS CATTLE. Kind, Mich. 10 choice bred bulls for sale. Largest herd in Michigan. JAS. H. HALL.

J. M. CHASE, Muir, Mich. breeder of Red Polled Cattle and Poland-China swine. Choice young stock for sale. Prices right.

SORTHORNS and POLLED DURHAMS. Four young bulls for sale. Correspondence solicited. M. H. FREEMAN & SON, Flushing, Mich.

J. F. & E. W. ENGLISH, Clarksville, Mich. breeders of registered Red Polled Cattle. Andrew Boy, sire and dame imported, heads the herd.

REGISTERED SHORTHORNS FOR SALE. young bulls, 6 or 8 young cows. Young Mary & Phyllis families, bred to Peri Duke 6th. MINOR DAVIDSON, Tecumseh, Mich.

A. No. 1 pure bred Holstein bull calf, 2 weeks old; Dam's dam won first prize in her class at the "World's Fair," 1893. No fancy prices. Also Poland-Chinas, spring farrow. B. F. THOMPSON, Detroit.

#### SHEEP.

REGISTERED RAMS AND EWES FOR SALE at Rambouillet, U. S. A. THOS. WYCKOFF, importer and breeder, Orchard Lake, Mich.

DOGS FOR SALE.—Sporting and Pet Dogs Pigeons, Rabbits and Hares. See for catalogue C. L. B. LANDIS, Bowes Station, Berks Co., Pa.

#### HOGS.

CHESTER White Swine and Lincoln Sheep. Either sex and all ages for sale. Sows bred for spring farrow. Write A. H. WARREN, Ovid, Mich.

FOR SALE.—Large Poland-China sows, bred to Model Wilkes, Vol. 20 for May and April farrow. Prices reasonable. F. M. PIGGOTT, Fowler, Mich.

MERCHANT KELLY, Woodstock, Mich., breeder of LARGE ENGLISH BERRIES. Pairs not akin for sale cheap.

POLAND-CHINAS.—Orders booked now for pigs. M. B. Turkey eggs, \$2.50 for 11, and B. P. Rock \$1.50 for 13. O. B. ROBBINS, Edwardsburg, Mich.

R. M. CROSS, Ovid, Mich., breeder of Victoria swine. Stock for sale. Breeding stock recorded. Reasonable prices. Correspondence solicited.

THE PLUM HILL HERD of large English Berkshire swine, B. P. Rock and S. P. Hamburg fowls. Stock and eggs for sale. C. M. BRAY, St. Johns, Mich.

POLAND-CHINAS.—10 sows bred for March and April farrow. Sept. boars must give place to the pig crop of '98. Shipping point Lansing or Grand Ledge. L. F. CONRAD, Waukesha, Mich.

LARGE ENGLISH BERKSHIRE SWINE of the best strains for sale. Write for breeding and prices. C. E. PAULTHORP & CO., Mt. Morris, Mich.

LARGE ENGLISH BERKSHIRE SWINE, highly bred, from leading families. Write for prices. V. E. HACKNEY, Mt. Morris, Mich.

POLAND-CHINAS.—5 sows, Black U. S. strain bred for April farrow. Bargains for buyers. Also fall pigs. E. D. BISHOP, Woodbury, Mich.

POLAND-CHINAS.—Two spring and 8 fall boars for sale; 4 choice sows to farrow in April. Prices right. Address WM. L. PENNOCK, Hastings, Mich.

POLAND-CHINAS.—A few choice young boars. A grand lot of sows bred to the champion young boars "Chief Hidestretcher" and "Wilkes Tecumseh," (Vol. 20, O. rec.). L. W. BARNES, Byron, Mich.

J. H. BANGHART, Lansing, Mich.—Duroc-Jersey swine, B. P. Rock and W. Pekin Ducks. Eggs for hatching. Catalogue free. Jerusalem Artichokes \$1; two bushels, \$1.50.

N. A. CLAPP WIXOM, MICH. BREEDER OF Large English Berkshire Swine. Write for prices.

GRAND RIVER HERD OF O. I. C. JOHN BERNER, Prop., Grand Ledge, Mich. My stock comes direct from L. B. Silver Co. Write for prices.

P. C. BROOD SOWS. High Quality, FOR 20 DAYS ONLY. Write to-day for price list. A. H. FOSTER, Allegan, Mich.

FOR SALE from my great prize-winning herd of registered O. I. C. swine. Twelve extra fine boar pigs old enough for service. First man sending draft for \$12 gets the choice. G. S. BENJAMIN, Portland, Mich.

Hastings Stock and Poultry Farm, breeder and shipper of Poland-China swine, B. P. Rock chicks. Write for bargains. WILLARD PERRY, Hastings, Mich.

CHOICE fall sows ready to breed, \$8 each; one fall boar, Wilkes, Corwin, U. S. and Tecumseh strains, always in stock. Toulouse Geese eggs 5 for \$1; Pekin Ducks, 13 for 75¢; Buff Leghorns, 13 for 75¢. All at Village View farm. Send for catalogue. J. C. TAYLOR, Grass Lake, Mich.

Special Sale of Chester Whites at CASS VALLEY FARM. Lot of fall and spring pigs, dandies, at 50¢ their value. Write to-day and secure a bargain. W. W. BALCH, Deford, Mich.

First Premium Herd of Poland-Chinas. Sows bred to King Klever for sale. Also some fall pigs. We own over one-third of the premiums offered at Mich. State Fair in '97, winning all the firsts on pigs, 8 herds competing. E. J. & L. HARRINGTON, Paw Paw, Mich.

BARGAINS IN P. C. Sows, Fall Boars, at Hickory Grove. Sows are bred to Ideal Chief for April and May farrow. A. A. WOOD, Saline, Mich.

CHESTER WHITES. Have a few choice young sows bred for sale; 18 sows bred for next season's trade, whose combined weight is 6,405 lbs. Booking orders for June delivery. 25 choice Lt. Brahma Cocks rels from \$1 to \$2 each; eggs \$1 for 15. W. O. WILSON-Okemos, Mich.

Mention Michigan Farmer when writing to advertisers.

## Grange Department.

Our Motto:—"The farmer is of more consequence than the farm, and should be first improved."

Address all correspondence for this department to

KENYON L. BUTTERFIELD,  
AGRICULTURAL COLLEGE, - MICH.

News from Michigan Granges is especially solicited.

### GRANGE NEWS.

#### CLAM LAKE GRANGE, NO. 725.

We meet every second and fourth Tuesday of each month. Have forty members. Average attendance, eighteen. Master, J. J. Hawthorn; secretary, Asaph T. Vants.

Wexford Co. E. E. GREENLEE.

WHITEY GRANGE, NO. 513. met March 25, with good attendance. Initiated two candidates in first and second degrees. Expect to receive four into full membership at our next regular meeting.

Tuscola Co. N. W.

ORANGEVILLE GRANGE, NO. 424.

March 19 we had a very nice program. Two of our old-time Patrons have come back. The subject of "Uniform School Text Books" was laid aside until the next meeting.

FRED W. LIVINGSTON, Cor.

Barry Co. ELBRIDGE CENTER GRANGE, No. 711

is still improving. Master read a paper at last meeting on "What Farmers Should Do." It was discussed by the members. Also balloted upon a candidate.

Oceana Co. MILES BROWN.

(What were the Master's views on "What the Farmer Should Do?" — Ed.)

FRUIT RIDGE GRANGE, NO. 276, was rather poorly attended at the last meeting on account of storm and bad roads, yet we had a good meeting. The question of equitable taxation was discussed, and it was thought that the farmers ought to push the matter at this special session of the legislature.

Lenawee Co. J. W. A.

STEBBINS GRANGE, NO. 709, entertained Antrim Pomona March 16 and 17, but owing to the condition of the roads but two outside Granges were represented, Alba and Helena. A full house at the open meeting in the evening. On the 26th (regular meeting) Stebbins Grange rendered the Arbor Day program.

Antrim Co. M. E. N.

COLDWATER GRANGE, NO. 137, conferred third and fourth degrees on a class of sixteen two weeks ago, reinstated five and celebrated the occasion with a delightful feast. The new members are all young people, and will be a great addition to the working force of the Order.

Branch Co. E. A. H.

MT. TABOR GRANGE, NO. 43, is right in the midst of an animated contest. We have good attendance, and new applications are being presented at every meeting. March 1 we had a "Novelty Social" at our hall, which was a decided success. The proceeds amounted to \$14.30.

Berrien Co. COR.

SILVER LAKE GRANGE, NO. 723, met March 5 and conferred the fourth degree. This was a most interesting meeting, as each member did his or her part toward celebrating Longfellow's birthday. Excellent essays were written on his life and works, and a few of his poems were recited in as fine a way as written.

Kent Co. COR.

BURNS GRANGE, NO. 160, met at the home of Bro. N. K. Potter, March 8. Quite a number of members of the Farmers' Club were present. Report from State Grange was very interesting. The question, "Beet Sugar," was thoroughly discussed by Bro. Potter; also "Hen Fruit," by Sister Reeves.

Shiawassee Co. M. A. WILCOX, Sec.

#### RURAL GRANGE, NO. 566.

March 12 three were initiated in the third and fourth degrees. Worthy master suggested we have a contest. Bro. J. Foss chosen secretary of contest; captains, Sisters Kery and Campbell. Contest is to run four meetings, the losing side to furnish supper. Good time expected.

Sanilac Co. JEAN S. CAMPBELL.

#### WHEATLAND GRANGE, NO. 273.

On account of bad weather and muddy roads we held no meetings in February, but during that time received one of the traveling libraries, and are much pleased with it. If there is a Grange in the State that has not had one, we would advise them to order one right away. March 25 we had an interesting meeting.

Hillsdale Co. COR.

BANGOR GRANGE, NO. 60, initiated one candidate March 19. The work of the Dairy and Food Commis-

sion was thoroughly discussed and it was decided to uphold the Commission in every particular. It was further decided that the work of the Commission should be extended so as to cover general merchandise, such as dry goods, clothing, etc.

We have sent for a traveling library. Van Buren Co. I. M. WILCOX.

#### ONSTED GRANGE NO. 279.

Again our Grange is called to mourn the death of a dear and worthy sister. This time, Mrs. E. A. Taylor. She was in every way worthy of our love and respect.

At our last meeting we discussed "The Pure Food Law" and "Uniformity of School Text Books." Result: Grange in favor of adopting both.

Lenawee Co. JENNIG NEWTON.

#### ROLLIN GRANGE, NO. 383.

met March 19. "In construction of barns are basements desirable?" was discussed. The secretary read a card from Bro. Taylor, of Onsted Grange, expressing his appreciation to us as a Grange for our sympathy extended to him, at a previous meeting, in the loss of his companion by death.

March 25 are going to have a sugar social.

Lenawee Co. C. T., Cor.

#### RAISIN GRANGE.

At our last meeting the third and fourth degrees were conferred on five candidates, followed by customary feast. Three more applications for membership.

A new hall is going to be built. Building committee has already been appointed and some logs hauled to the saw mill.

NELLIE BOWERMAN, Cor.

Lenawee Co. A TRIBUTE.

Here is an extract from a letter which explains itself:

I'm just in from the Alpine Grange 24th anniversary. Alpine Grange hall is an educator—a beautiful room, carpeted and furnished; pictures upon the walls, a library of 300 volumes kept in a fine bookcase, a home in the country where men, women and children show in their lives the refining influence of culture. I never saw the influence of the Grange so beautifully emphasized as here. Fraternally,

D. E. MCCLURE.

#### PORLTAND GRANGE, NO. 174.

is prospering and bids fair to become one of the liveliest Granges in this section. We have well attended meetings, and our new members seem to enjoy their new found home, and the veterans have taken new courage and are enjoying the fruits of their labors. We are thinking of building sheds for teams, and also of enlarging our hall, which is too small for our increased membership.

Ionia Co. GEO. W. PEAK

#### FREMONT CENTRE GRANGE, NO. 654.

Last regular meeting was not as well attended as usual, although a pleasant night. A good time was had, some good readings and recitations being rendered. The Uniform Free Text Book law, as passed by the last legislature, was freely discussed; the Grange thought the law all right and decided that it ought to remain in force, and if any change be made, make it more mandatory.

Sanilac Co. COR.

#### ST. CLAIR AND SANILAC CO. POMONA GRANGE

held their quarterly meeting at Rural Grange, but owing to the state of the roads the attendance was not as large as was anticipated. There was a good program, and well carried out. The following resolution was adopted: "Resolved, That this Grange approves the course of Gov. Pingree in regard to lower rates of transportation, and taxation of corporate bodies so as to equalize taxation."

F. W. TEMPLETON.

COLDWATER GRANGE met March 15 and passed memorial resolutions for Sister Charlotte Ferguson, who died Feb. 26. Sister Ferguson had been a member of our Grange twenty-three years, and her example of faithfulness will be treasured by many younger members.

We have twenty-six new members and all seem interested. Expect to do good work all summer.

Branch Co. CARRIE COX.

#### UNION GRANGE, NO. 97.

Prof. Thomas and Prof. Lewis gave a very pleasing concert a short time ago under the auspices of the Grange. Two applications for membership were voted upon at the last meeting and one more presented. Worthy Master Buell reported having done some work towards organizing a Grange in the southern part of the county. We were pleased to see some of the long absent members back again, and hope to see them often.

F. ELLA KILBOURNE.

Branch Co.

IRONTON GRANGE, NO. 707, is very much awake just now; we are in the midst of our contest. We hold it six consecutive weeks, the seventh week the losers to give a supper. Everything so far has been pleasant and instructive. Two new names were presented last review, and a debate arranged for this week, which counts 100 to the winning side. Question, "which is preferable, city or country life?"

Charlevoix Co. HATTIE C. ALLEN, Cor.

#### CASCADE GRANGE, NO. 63.

discussed Hawaiian annexation. Those favoring it thought it desirable for a coaling station, and its trade. Those opposed thought that, as 90 per cent of its trade with us is sugar, coming into competition with our own future beet sugar, we do not need the trade; while we already have all the coast we can defend. Besides we don't want the kind of people who live there.

Gave first degree to thirteen.

Kent Co. COR.

#### RONALD GRANGE, NO. 192.

discussed "Uniform System of School Text Books" at last meeting. No decision rendered; general opinion of school officers present was that the more the people of their respective districts become informed of the law, the more favorable they seem toward it. Question box called forth much of interest and a graphophone furnished excellent music. Are busy with initiatory work. Will serve warm sugar at our next regular meeting.

Ionia Co. CORA B. WATERBURY.

#### HOPKINS GRANGE, NO. 390.

closed contest March 12. Third and fourth degrees were conferred on sixteen, followed by a feast. Question discussed, "Resolved, that Washington did more for his country than did Lincoln." Decided in the affirmative. The hall was prettily draped with the national colors and a good program rendered. Our winter's work shows a gain of twenty-two new members and one reinstatement. March 26 we gave third and fourth degrees to two, followed by a maple sugar treat furnished by the defeated side in the contest. Discussed, "Uniformity of text books."

Allegan Co. MRS. H. H. H.

#### BANNER GRANGE, NO. 640.

at its last meeting passed the following resolution: "Whereas, the wheat grown in Michigan is of the best, and whereas, under the manipulations brought about by the board of trade of Detroit the growers of this cereal are compelled to take a price equivalent to one full grade below the one to which their grain belongs, therefore be it

"Resolved, by Banner Grange, No. 640, that we ask and earnestly urge the legislative committee of the State Grange to secure from the next Legislature the enactment of a law providing for State grain inspection."

Ionia Co. COR.

#### LAFAYETTE GRANGE

held an open meeting Feb. 22 at Lima town hall. Worthy master of the State Grange was present and gave a very interesting talk. Miss Flora C. Buell, of Ann Arbor, was with us and talked on "The Possibility of the Grange." The meeting was well attended and enjoyed by all.

met at the home of Bro. and Sister Sweetland March 10. On account of rain and bad roads there was a small attendance. March 24 Grange met with Bro. and Sister E. B. Freer. We were highly entertained with a recitation by Mrs. G. T. English, entitled "The Two Pictures."

In two weeks meet with Bro. and Sister O. C. Burkhardt.

#### BAINBRIDGE GRANGE, NO. 80.

Small attendance at meeting March 12, on account of rain. Discussed "Do Granges receive any benefit by changing programs?" Yes, not financially, but educationally and socially, more than pays the time; for each one on the program tries to respond with something most appropriate for the Order. March 19, one took second degree; four new names added. We entertain Pomona first Wednesday in April. The ladies organized a society last year and held a social; cleared \$22.70. Will reorganize soon; have 43 members in the society; are called the "Grange Workers." They meet at the hall to work for the Order.

MRS. E. STICKNEY, Cor.

#### CLEON GRANGE

Our Pomona as well as the Subordinate Grange is prospering. A class of seven from Cleon Grange took the obligation of the fifth degree at the last meeting of Pomona Grange. We make the question box an interesting feature of the program. One question at the last meeting "Is a man a progressive farmer who does not belong to the Grange or Farmers' Club?"

Ans. Yes; but if not a member of the orders he must be in sympathy with them. Another question, "Define Autonomy." If it had not been answered some one would have been appointed to look it up and give the correct definition.

Manistee Co. EVA READ.

#### ALUMINA GRANGE, NO. 585.

March 12 "Railroad Rates" was the topic for discussion. General opinion was that they were too high, but the question was how to lower them.

The traveling library arrived in good condition, and the Grange is highly pleased with it. Some time was spent at our last meeting in looking it over, fifteen books being drawn out. The Grange decided that it was best to let no one except Patrons and their families have access to the books.

March 25, "Uniformity of Text Books" was the question discussed. Opinion, that there should certainly be a uniformity. Patrons are well pleased with the traveling library and there is great call for the books. Question for next meeting, "Soil Fertility, and How Best to Retain it."

Muskegon Co. MRS. DELL VIETS.

#### KALKASKA GRANGE

held a very pleasant session March 12. "How to Make the Grange Interesting" was taken up by the lecturer. Following are some of the very practical thoughts presented: "Let us be true to the Grange in all its bearings." "Let us plan during the weeks between Grange meetings to spend two hours in the Grange." "Let us bring something to read or have something to say that will be of interest to the Grange." "Let us have a social gathering at the homes of the Patrons once in two weeks." "If the Grange prospers we must work in it unitedly." "Never do or say anything to injure a brother or sister." "Let us try to help each other in all lawful undertakings." "Let us ever be true to each other."

Kalkaska Co. H. A. BARNARD.

#### PENNFIELD GRANGE

held its regular meeting March 18 and, though the attendance was not large, had a very interesting meeting.

The subject, "Making the most of ourselves," was discussed by different members, and all thought in order to accomplish this, not only must we cultivate our mental powers, but conquer ourselves, live honest, Christian lives, and strive to do our very best in every undertaking, however menial it may be. Little Harold Garrett gave us a very nice recitation in a manner that would do credit to a much older person. The subject, "The best way to cure wood," was taken up, and the best results had been obtained by splitting while green and seasoning under cover, with sufficient ventilation.

Calhoun Co. MRS. E. J. SMITH.

#### FIFE LAKE GRANGE

met at their hall March 15 at 10 a. m. The fourth degree was given to a class of seven, after which a sumptuous repast was served.

In the afternoon a program was given to which the public was invited, and, notwithstanding the inclemency of the weather, a goodly number availed themselves of the invitation. The exercises consisted of music, recitations, declamations, an original poem by Sister Learn, and a discussion on sugar beets. A committee was appointed to draft resolutions on the death of Jeremiah Price, a charter member of the Grange and an old citizen of the township.

Our Grange, although so recently organized, is taking up the good work in good shape.

Grand Traverse Co. L. S. WALTER, Rep.

#### BUNKER HILL GRANGE, NO. 262.

Storms have interfered with our recent meetings, but March 12 we had a fine meeting. Received two applications and look for more. Ingham county Pomona Grange meets with us April 14 and 15. In looking over the books I find we have six charter members of twenty-five years' standing, and seven that have been with us over sixteen years. We are going to start another contest. To make us more familiar with the unwritten work. A member making a plain sign to a member on the other side (in the Grange hall) and not being recognized, will secure five points and the other will lose five.

Question discussed, "How can we as Patrons best purify politics?" Attend caucuses, put in nomination only the best men, and instruct them to use caution and see that they understand our distress.

Ingham Co. F. W. HAVENS.

#### HUDSON CENTER GRANGE

March 11 was the darkest night and the worst roads we have had to face since organized. Twenty-three were out and we had an excellent program. Some ideas advanced on the question

of "Arbitration" were: "Arbitration would be the most economical way of settling disputes between nations." "It would be and is the only Christian way." "Would strong nations abide by the result if it went against them?" "The best way to insure peace is to be prepared for war." "If the Maine was destroyed by treachery we would not want to arbitrate the matter or accept money for damages."

This Grange has adopted the plan of having the current events of the preceding two weeks briefly told by some member and discussed by the whole Grange. It works well. Try it. After meeting we adjourned to the home of a near-by member and had oysters and a pleasant evening.

Lenawee Co. H. C. V.

DE WITT GRANGE, NO. 459, conferred the full degrees upon a class of 22, and reinstated nine; taken in one on demit, conferred first and second degrees upon 12, elected six, and has two applications, all since January 1, 1898.

The Grange is engaged in a contest; each side has three nights. This has been the means of bringing to the front many young and diffident members who could never before be prevailed upon to do anything in Grange work, but several have given splendid papers and recitations. The lecturer hopes that after the contest the members will more readily respond to the program.

We are glad to see so much Grange news in the Grange department. We hope, after the contest is over, to have some important questions brought up for discussion.

MRS. C. L. PEARCE, Lecturer.

Clinton Co. WORKING GRANGE, NO. 500,

rejoices in a Grange and Teachers' meeting. These meetings were brought about through the efforts of the Woman's Work Committee, which is composed of one Sister in each school district represented in "Working Grange." The main object is to improve the mental and moral surroundings of our country schools; special invitation is given the teachers and school boards in the township, but all are privileged to attend. We have at least one meeting of this kind each quarter, our last one being held March 19; a very efficient paper on the subject of "Free Text Books" was read by Mr. C. Finger. In the discussion which followed it was evident that whatever tends to diffuse education will meet with approval in this locality. "The Noon Hour" was also freely discussed.

These meetings have been a source of increasing interest in the Grange, and, as a result, some of the best talent in the community has been added to our number.

Lenawee Co. MARY W. PETTIS.

MONTCALM GRANGE, NO. 318,

met in regular session March 19; the day being fine a good crowd was out. "Is an extra session of the Legislature desired by the Farmer?" Some thought the object could be gained just as well at a regular session of the legislature, and save expense of an extra session. Others thought that if we were to gain anything at all it must be done in this way, even if it does cost \$30,000. After quite a lengthy discussion an expression of the members was taken, with the result that only three were against it.

"Which theory of government is on the increase, republican or monarchial?" It was decided in favor of the former. Our worthy secretary Mrs. C. H. Thompson delightfully entertained the young people of our Grange, about 20 in number.

Montcalm Pomona hold their next meeting at Douglass April 7. Our traveling library gives good satisfaction.

Montcalm Co. J. M. PARKHURST.

PLYMOUTH GRANGE meets once a month. At January meeting we listened to the reports of our delegates to the State Grange. Those reports and the installation of officers made our meeting one of much interest.

Our February meeting was held at the home of the Worthy Master Henry Hurd. The dinner was up to the usual standard of Sister Hurd's efforts. After the ritual and regular order, the lecturer called for impromptu reports from the Wayne County Farmers' Institute. Sister Bradner reported for the Woman's section, and Bros. Bradner, Dean and the lecturer for the general sessions. The lecturer rejoiced that the University of Michigan had commenced to do tardily what ought not to have been so long delayed—put itself more in touch with the farmer as a component part of our great commonwealth by sending some of its force to act as instructors at the insti-

tutes. He gave an abstract of Prof. Taylor's lecture on "Producers." Bro. Charles Smith did not agree with the Professor that even the lawyers and members of the much maligned board of trade were producers as truly as the farmer who raised potatoes or wheat. In spite of his adverse criticism, the Professor's positions are true. Only Deity can produce in the sense of creating, but regarding production as only a readjustment of elements and forces already existing by which we obtain what supplies our wants, the Professor's conclusions must stand. The discussion of the Hawaiian treaty being the regular order, an hour of very animated argument followed.

Wayne Co. LECTURER.

CHESTER GRANGE, NO. 520, held a discussion on school books, but did not come to any definite conclusion, yet the majority of the members believe that if we had uniformity of text books it would be better for the school and much cheaper for the patrons.

Last Tuesday our young members' dramatic club presented to the public their new play, entitled, "The Deacon." All were very much pleased with the play and also with the able manner in which it was handled. It is a great help to young members in appearing before the public. It also helps to build up the Grange, and to show we are improving.

We have just received our traveling library and think it is good as far as it goes, but there have been many complaints entered as to the kind of books sent us. They do not find favor with the Patrons. We would like to hear from others in regard to this.

Allegan Co. CHESTER GRANGE

met last with Rural Grange of Wayland. Owing to rainy day fewer present than expected. Election of officers resulted as follows: Worthy Master, F. M. Robinson; overseer, A. C. Gilbert; lecturer, L. C. Root; secretary, Mrs. Bragg. Officers to be installed at next meeting. A very interesting report was given by our delegate to State Grange, Brother F. W. Robinson.

Lecture hour was opened by address of welcome by Sister Slade and response by Brother A. C. Gilbert, of Moline.

Quotations by all, giving author's name, were quite a success for first time. A splendid paper on "What Constitutes a Successful Farmer" by Brother T. G. Adams was followed by discussion.

Select reading by Sister Tonnes caused much merriment. "Diversified Farming" was next discussed. Next meeting will be held with Hopkins Grange April 21.

O. BRAGG.

PLYMOUTH GRANGE held its March session at Brother Bradner's. Visitors from Redford Grange present. After dinner, delegates to the State Grange told us of their pleasant experiences at the other subordinate Granges. Following their reports we had an animated discussion for an hour and a half of the "Township Unit School System."

The affirmative argued—that the property of the State ought to support the schools of the State.

Under the present system most of the burden falls upon the district. Small districts, with low valuation, are taxed heavily, yet can only have short terms, by inexperienced teachers.

The township system would, at least, make all the property of the township support all the schools of the township. The schools with only one to three pupils would disappear. A perfect system of grading with a central high school would result, at less expense than at present.

The negative replied—that a central high school was not desirable. That the massing of so many children fostered vicious habits.

Assuming that the system of transporting the pupils from home to the central school, at public expense, would be the final outcome, great risk to health, and an intolerable lengthening of the school day by the long journey, would be the certain result. It is unwise to risk certain moral and physical injury for the sake of possible mental good.

They said only possible mental good because the children sent from the district school always enter the graded school in advance of those of the same age reared in the village. Finally—the proposed change would take out of our hands the last vestige of pure democracy. All our governmental affairs would be administered by representatives.

The Grange voted unanimously in the negative.

We meet in April at Brother John Root's, for exemplification of the un-written work.

Wayne Co. LECTURER.

THE BANNER GRANGE COUNTY OF THE UNITED STATES.

At least we will claim it as such until further returns come in. A new Grange, with a large charter list, was organized in Ogden township, Lenawee county, on the evening of March 11, making 26 Granges in the county. All are active and hold regular meetings every two weeks, with good attendance. All meet evenings except one, which meets in the afternoon. Evening meetings are decidedly the best for the active, working farmers and the young people.

Eleven of these Granges own in their own name two-story halls about 24x60 feet on the ground, and some of these have wings and attachments to accommodate stage fixtures, libraries, museums, etc. These halls are all well furnished and make model Grange homes, with kitchen and dining-room fixtures. Nearly all have sheds for teams. Nine more of the 26 Granges are preparing to build halls the coming year or very soon after. Several have adopted plans and have appointed committees to execute them.

In these halls the first story is used for general assembling prior to calling Grange to order. All around on the walls of this lower room are hooks for coats, shawls, etc. In this room are kept tables and extra chairs, and adjacent are kitchen fixtures. This lower room always being warm (a furnace to warm the whole building usually sets here), the children here assemble, and so no mother need stay away from Grange on account of the children. Upper rooms are used for Grange sessions, and are carpeted and well furnished. It is the custom here to admit children to the Grange meeting during lecturer's hour and to use them in programs frequently.

The six remaining Granges meet in

rented halls in small county burgs, and are comfortably situated, although they can never expect to be so independent and permanent as if they owned homes of their own.

Lenawee Granges are alive to all parts of Grange work, and there is no hesitation in taking up and considering all propositions presented by State Grange or other authoritative source. In short, Lenawee county Granges are workers, and through their works they attract good farmers to the Grange, and keep them there because of good work well done.

Lenawee county Pomona Grange is strong and active. All members pay their dues promptly and all paying members are protected by Pomona, using an annual word. The Patrons' Mutual Insurance Co. is growing fast in membership.

All subordinate Granges strive to be perfect in all ritualistic and degree work, without omission or abridgement, and some Granges have degree teams who have all such work thoroughly committed and visit neighboring Granges to perform degree work.

Co-operative buying is common, and most members do enough along these lines to more than make free to them all other advantages and benefits of Grange associations.

The farmers of Lenawee county take up Grange work as a matter of business, and give to it their efforts, time and money. The opportunities and advantages the isolation of farm life deprives our people of they propose to bring to country districts through the Grange. And from the number and high character of our general membership, and the deep interest they manifest in the work, the Grange will be as permanent and general as the district school. It is well known by our Granges that present success brings great responsibilities, and knowing it there is but little doubt of the membership lacking in that good judgment and sense so essential in perfecting even good things.

GEORGE B. HORTON.

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At the Annual Convention of the Wisconsin Dairymen's Association, held at Manitowoc, Feb. 9-11, 1898, R. M. Bussard, Proprietor of the Bussard Creamery, Poynette, Wis., won the

## SWEEEPSTAKES

over the largest number of exhibits and finest lots of butter ever exhibited. No entry scoring less than 92 points.

POYNETTE, WIS., Feb. 19, 1898.  
I have received the \$25.00 sent me as premium on butter that scored the highest (98 1/2) at the Manitowoc Convention of the Wisconsin State Dairymen's Association. I got the Sweepstakes and three other first prizes, amounting in value altogether to \$15.00, and all because my No. 1 U. S. Separator makes such smooth, perfect cream. It is easy to make fine butter out of such cream.

R. M. BUSSARD,  
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American Buncher Manfg. Co., Indianapolis, Ind.



## Miscellaneous.

### A PROPOSAL OF TO-DAY.

"For some time," observed Mr. Markham, "I have been beset by the idea of proposing to you."

He was standing with his excellently flat back to the mantelpiece, and Miss Greatorex was covering a silk bandanna handkerchief with an opposition pattern in colored wools—why, Mr. Markham could not make out. There was no one else in the room, and, as was evident, the gentleman was disposed to be confidential.

Miss Greatorex smiled.

"And why have you not?"

"I have at times been half afraid that you might accept," replied the candid young man. "At others," he added (thoughtfully removing an almost invisible dust speck from his sleeve), "I have been much perturbed by the possibility—oh! certainly the possibility—that you might refuse."

"It would be disagreeable to be refused," remarked the lady, impersonally.

"That," the gentleman considered, "depends. If I was sure I wanted to marry you, it would unquestionably be disagreeable to be refused."

"And you are not sure?"

"No; very far, indeed, from being so. At times I think I should much enjoy the role of Mr. Greatorex, so to speak."

"But not always?"

"Oh, dear no!—not nearly always."

Miss Greatorex had a canary, which at this juncture began to sing with an air of the most uncontrollable merriment. Mr. Markham went to a neighboring drawer and produced thence a cloth, with which he covered the cage.

"You are not sure whether you are in love with me or no?" remarked the young lady, as the bird's indignant silence succeeded to his previous irrelevant rhapsody.

Mr. Markham came back to the mantelpiece and, having readjusted his back, he said in a low voice, and looking down at the very adjacent brown, bent head:

"I admit I am disappointed."

She looked up rather quickly.

"Bitterly. I had no idea that you could be stupid—it is evidently possible."

From the motion of Miss Greatorex, her head—as they would say in the old books—he implied a note of interrogation.

"It is stupid not to have grasped the question. I have for quite a long time known that I was in love with you."

"Ever since luncheon?"

"Perhaps not quite so long as that. But certainly ever since, almost ever since, Lady Greatorex left the room."

The young lady laughed.

"Was my mother such an instance of George Eliot's malign prophet standing behind her daughter and threatening what she will be."

"I merely meant that the presence of a chaperon is incompatible with sentiment."

"I," observed the young woman, "do not mind admitting that I am getting confused. You now assert that 'for more than twenty minutes you have adored me'" (Mr. Markham's shoulders appeared to deprecate the exaggeration of this rhetoric), "and a moment ago you seemed much to doubt your love."

"Not at all. That is why I lately called you stupid. I am sure that I am in love; but I am very uncertain as to whether I would like to marry the beloved object."

Miss Greatorex laughed.

"I admit it sounds, perhaps, improper. I merely mean that marriage as the necessary denouement of being what is called in love seems to me quite a doubtful expedient."

"When there is no question of being in love," he continued, relaxing himself by a short walk to the other end of the room and back, "I think marriage not a bad arrangement. It is then merely a form of business partnership, and now that it has ceased to be insoluble has no special terrors. But you and I have nothing to gain by that. I am exceedingly well off, so are you. I do not need to marry for position, nor do you. We neither of us need to demand blood, like Hamlet's aunt. In fine, as they say in the 'Arabian Nights,' you have nothing to gain by me, and I have no material need of anything you can supply me with. Markham is just as fine a place as Greatorex Abbey, and not a bit finer. When I speak of being in love it is purely a personal sensation; I should like it to become chronic."

I really enjoy being in love. But if we got married!"

"You cannot anticipate your love standing that crucial test?"

"I honestly admit that I have my doubts. We live in a straightforward age; let me make a clean breast of them. Do you, for instance, like to talk at breakfast?"

"Not always."

"I, never. If you were licensed by the ceremony of marriage to inundate me with matutinal conversation, I should be rendered at once miserable. A feeling of decency would prevent my showing it; I should suppress it. That suppression would at once destroy all openness between us."

"You take, I think," interrupted Miss Greatorex, "a morbid view of the duty of conjugal confidence. You would push it too far."

"My views are always high. Perhaps I do; but that is how it strikes me. Every morning I should join you at the breakfast table with the unspoken terror that you were about to converse. I think it possible that you also like to talk in the train and in cabs?"

Miss Greatorex asserted that such was indeed the case. Mr. Markham sat down on a chair at some little distance.

"Exactly. And to talk in the train only makes me less passionately angry than having to speak to anybody, above all to answer their questions, in a cab."

"Of course," remarked the young lady, wishing to allay the anxiety of her friend, "you will recollect that the present discussion is purely academic. I have never definitely asked you to be my husband."

"No," he admitted, very handsomely. "I remember that. I have admired you for not pushing your advantage. Any day within the last week you might have suggested it, and Heaven alone knows whether I could have refused. It is very improbable that I should have been sufficiently firm."

"You almost tempt me to try."

Mr. Markham raised his hand.

"Wait," he cried. "Do let us finish this most interesting conversation. What I would wish to express is this, that marriage when one is really in love seems to me to vulgarize the situation. It makes, to use the familiar expression, a business of a pleasure. Or, more accurately, to make into a vulgar business matter what should be jealously guarded from any taint of business suggestion."

"Your objections are, after all, proper only to the modern marriage?"

"I was not," he confessed, "thinking about the Garden of Eden. Business was in its infancy then—so was marriage."

"For my part," he continued, "I dislike anything as soon as it becomes a duty. I used to like hunting; since they made me master I look forward to the autumn as a parson looks forward to Sunday, and yet there was a time when he doubtless loved going to church, when it was only a permissible recreation. Supposing it were one of the Ten Commandments that we should go to a ball every Monday and the opera every Wednesday?"

"And you mean that you would dislike the duty of being permanently in love with me," said the young lady, who perhaps found his remarks becoming too general, "though as a temporary sentimental excursion you have not hitherto found it disagreeable?"

"What I find fault with is," he declared, without very directly replying to her question, "that unless one were to marry you one could not do several things one would like. For instance, I would like very much to take you to India."

"When?" inquired the young lady, with somewhat startling definiteness.

"Not," he replied, "till, say, October. India in the middle of the season you would not enjoy a bit. But I really fear (unless we do get married) the trip is impossible. All the same, I should love to explain the Taj to you, and Shah Alim's mosque at Ahmedabad—oh, and the Golden Gate at San Francisco; it is tiresome that I cannot take you there without marrying you."

"You could take mamma as well, and Aunt Adeliza, perhaps."

"That would be different. A superior plan for those to whom it commands itself, but personally I should not like it so much."

Miss Greatorex laughed. Mr. Markham left his sequestered seat and took one beside her on the little sofa.

"Were you thinking," asked the lady, "that you would like to take my hand?"

"I have thought that before. I was thinking of taking it. Now, if we were

married," he continued after an interval, "this would be my business. It would be expected of me, as it is of a hen to lay eggs, or the Prince of Wales to lay foundation stones."

"And then it would cease to please?"

"It would then become detestable. And often lately I have pictured myself as riding home in the deepening dusk of a winter's afternoon from hunting, either with you by my side or to find you waiting for me at home. When I think of it I nearly take a hansom and come here to lay myself at your feet."

"Why don't you?"

"For the reason detailed above. I picture being refused and the subsequent discomfort and inconvenience. It would entail an entire change of all my plans for the rest of the season."

"But if you were not refused?"

Mr. Markham started.

"Oh, that certainly struck me as an alternative, but I did not find it less alarming. If I were accepted we should probably get married; and how dull for us both it would subsequently be! What I should really like would be for you to come and stay just in our present capacity at Markham, say, for a year. You would walk with me, row with me, fish with me, hunt with me; I would read to you my favorite bits of my favorite authors, and you should retaliate with yours. I can imagine nothing so delightful. I have already had you to stay at Markham; but then Lady Greatorex and Sir Madam came, too, and my sister came down to do hostess. We were never alone except now and then for a quarter of an hour of mutual endeavoring."

"Thank you," interjected, with some asperity, the lady.

"What I should like would be to have you thus for a time all to myself. You would find me much nicer than you imagine. I have much more 'to' me, as the Yankees say, than you would think."

"You are not, in fact, such a fool as you look."

(Mr. Markham took no notice whatever of this frivolous interruption.)

"Well," added the lady, "on one condition I will come. Do not look frightened; I don't mean to insist on a 'prior engagement.' You need not promise to marry me. But I will come for a whole year to Markham if—if I may bring Lord Mendip with me."

"Lord Mendip!" Mr. Markham released what he had been holding and laid it back in the young lady's lap with something of the air wherewith one puts down again upon the counter an article that one has been fingering in a saleroom, when one discovers it is marked "Sold." He resumed his position on the hearthrug, but without again accommodating his back to the mantelpiece. "It was," he remarked presently, "very nice of you to inform me of your engagement in that way. You can do things when you try, very gracefully. A more awkward woman might have told me flatly half an hour ago."

"I was going to tell you just now. But you begged me to wait, as you wished to finish your delightful conversation. I concluded that you thought you were shining. After all you do not affect to ignore your reputation as conversationalist."

"I am sure," he said, after the briefest possible pause, "you would be extremely happy. That is certainly my wish—that you may be as happy as you deserve. Lord Mendip's happiness, of course, goes without saying. It is interesting to think that he was my grandfather's fag at Eton."

"He told me it was your great-grandfather."

"Ah! I think he was mistaken. My great-grandfather died quite two years before Lord Mendip was born, and he was not at Eton. Where there is any disparity of years—"

"Between Lord Mendip and myself there is some disparity."

"Quite so. But it is on the right side. I take it Lord Mendip is not more than 80?"

"Scarcely so much," declared the young lady with admirable temper.

"He is but 74."

"And he is a peer. It is better than anything I could have offered you."

"As to that, when your uncle dies you will be a duke."

"My uncle does not contemplate any public event so little as his own decease. And he is a year younger than Lord Mendip. He will doubtless marry again."

"Yes, I thought of that; I took that into my consideration," the young lady asserted, staring full up into Mr. Markham's face, with an expression he rather failed to understand. There

was something unusual also about her voice.

There was a slight sound behind her. "Here," remarked the young man, looking over her head to the suddenly opened door, "comes Lord Mendip himself to receive my congratulations in person."

Miss Greatorex leaped to her feet. "Don't, for heaven's sake, don't!" she cried in a smothered voice. "It was a lie. I did it to see if I could shake you at all."

Lord Mendip ambled forward with a keen old look in his faded eyes, and a much "cocked" expression about his half-deaf old ears.

"Congratulations, eh? Who am I to congratulate? I think I heard something about congratulations in person."

"Yes, Lord Mendip, I want yours." Mr. Markham sighed heavily. "I have just proposed to Miss Greatorex, and she has been good enough to accept me."

"Lord! how interesting," cried the old gentleman. "I recollect your father was my fag at Eton—I'm talkin', yer know, of the year '39. By Jove! you're a lucky chap, Markham, and I do congratulate you."

Mr. Markham received these felicitations with some emotion, and sighed again, not less heavily.—Black and White.

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## The Dairy.

We have a complete Dairy and Farm Creamery in constant operation on the Experiment Farm at Climax, Mich. This is personally conducted by J. H. Brown. All dairy correspondence should be sent to Climax, Mich.

### THE EDITOR'S DAIRY NOTES.

#### DIFFICULT CHURNING.

Why can I not get butter when I churn? If left over night in the churn the butter fat will rise to the top, resembling whipped cream. I churn once a week. Test the temperature with a dairy thermometer. Have one Jersey and one Holstein. One will be fresh in four weeks, and one in six months. Have tried the cream from each separately with same result. Feed mixed hay, cornfodder, beets and pumpkins; salt accessible at all times. Marion, O. SUB.

ANSWER BY GEORGE E. SCOTT.

This difficulty is not new where there are only one to three cows, and is not easy to get over, always. The theory in this case is that the feed is more responsible than anything else, though other things may, and likely do, exist that prevent proper separation of the butter.

The ration mentioned is highly out of balance. It is so deficient in grain element that no cow can consume the necessary dry matter to support herself and at the same time place the normal quantity of fat and other solids in her milk.

Neither beets nor pumpkins contain much nutriment in 100 pounds, and when the feeder computes what a quantity a cow must consume to get 2.25 pounds protein, he can readily see that it is out of the question for a 1,000-pound cow to consume enough of either or both to obtain the necessary protein.

Is this not a philosophical solution to the question? With a cow near the period of parturition, such an unbalanced ration would naturally derange her physical powers so that she could not produce milk that would handle to advantage. Without the chief basis of milk, a liberal supply of protein, it is out of the question to produce a class of milk that will churn out, even under the best care.

I would suggest to Subscriber to feed a little less, likely of the hay, fodder, beets and pumpkins, and add six quarts per day of corn and oats, equal in weight, ground together with one-third bran in weight, and add a pint of oil meal or one quart gluten meal to the ration. I would suggest that the pumpkin seed should not be fed, as they have qualities that tend to dry out the tissues of the milk glands, and sending out the fats into fattening channels of the animal.

It may be that the age of the cream may have some influence upon the difficulty in churning. Too much ripening age will practically defy separation after reaching the last stages of a butyric acid condition.

I would suggest churning at least twice each week, especially where the cream is raised in shallow pans and stands two or three days before skimming.

The use of the dairy thermometer is valuable, and cream raised at home and skimmed, must be churned at from 63 to 65 degrees in winter, though the common dairy thermometers vary several degrees and require judgment in their use.

In the above reply, taken from the Ohio Farmer, friend Scott does not solve the difficulty of churning and failure to secure the butter. The same queries are at hand, and we add a few comments of our own.

The Jersey so far along in gestation, and due to calve in four weeks, should be milked and the milk thrown away. The milk is not fit for human food, and is so viscous that it is almost impossible to churn.

"Sub." should have ceased using this milk two or three weeks before the date of making inquiry. It may be that he tried to "dry up" this cow, and failed. In such a case we should have advised him to keep on milking, throwing the milk into the receptacle used for skim milk and other hog feed.

The other cow had been milked six months, possibly longer, as "Sub." says she is due to calve in six months. Consequently this cow's milk is getting more or less viscous also.

Now, the trouble was that the combined milk from these two cows was so viscous, or adhesive, that the butter globules could not all rise to the top in creaming, and more or less fat was lost in the creaming process, no matter whether deep or shallow setting.

The next mistake, and the trouble

combined, was in holding the cream for one whole week, probably having very thick and very acid cream to churn. It would have been better to use the last named cow's milk and cream alone, churning twice a week at least.

Make the milk more fluid at the time of setting by adding ten to twenty per cent warm water, or by heating the milk before setting. When ready to churn the cream, if properly ripened, add enough water to make the cream quite thin.

After preparing the churn and turning in the cream, see that you have the proper temperature before making a single turn of the crank. In all probability your cream was too cold at the time of your recorded experiment. We cannot give you the exact temperature, but should say that about 65 to 67 degrees for your churning that day would be nearly correct. You do not give the temperature, although you state that you tested the cream.

The best thing you can do is to add the milk of a fresh cow to that taken from the cow that is due in six months. Then your milk and cream will not be so viscous, but more fluid, and the difficulty in churning will probably cease.

The winter is nearly over, and you will find it better soon to churn at a gradually lower temperature until hot weather arrives. There are so many conditions to consider in the daily manipulation of this dairy business that it is sometimes hard to give advice at a distance, but the above will hit the case in hand.

As to the feed, it is not balanced, and friend Scott gives good advice thereupon. We would not think of keeping our cows through the winter upon such a ration.

#### DAIRY PRODUCTS.

At the recent meeting of the Maine Dairymen's Association Prof. Woods, of the State Experimental Station, spoke on "Dairy Products Compared with Other Food Products." Some of the points of his address are as follows:

#### MILK AND ITS PRODUCTS.

A pound of butter contains no protein but is 82.4 per cent fat. A pound of whole milk cheese contains 26.1 per cent protein or flesh-forming ingredients, 33.5 per cent fat. Whole milk is 87 per cent water, protein contents 3.3, fat 5.

Butter furnishes none of the flesh formers, but it has a very high fuel value because of the fats which it contains. A pound of butter fat is probably of no greater value for nourishment than an equal weight of fat of beef or mutton, or pork, or olive, or other oils used for food.

Cheese is, in one sense, concentrated milk, for cheese made from whole milk contains the same ingredients as the milk from which it is made, although there is, of course, a loss in the manufacture. This loss consists largely of milk sugar; in other words, it is greater on the side of the fuel ingredients than on that of flesh-formers. It would take eight pounds of whole milk to furnish the same weight of flesh-formers as a pound of cheese, but six pounds of milk has as large fuel value as one pound of cheese.

Milk is generally the cheapest source of animal protein at the command of the farmer. The fat which it contains is, however, an expensive form of fat. A pound of butter fat in milk, which ought to make a pound and a fifth of butter, is worth to the producer from 15 to 30 cents, according to the locality and season. As compared with the fat of meat the butter fat has a nicer flavor and brings a higher price, but for actual nutriment of people in good health and with good digestion, there is no physiological evidence to show that one is more valuable than the other, weight for weight.

Few people realize that a pound of whole milk contains as much nutriment as a pound of fish or a pound of oysters, and that a quart of whole milk equals in the amount of digestible solids, a pound of beef, a pound of veal or a pound of chicken.

It is a very common notion that eggs are a very concentrated food. One used to hear the statement frequently made that an egg was equal to a pound of beef. It takes seven or eight eggs to weigh a pound and it takes a pound and an eighth or eight or nine eggs to furnish the same weight of nutriments as a quart of whole milk.

Skim-milk, Prof. Woods showed, contains nearly ten per cent of solids or nutritive ingredients. He said that average skim-milk contained in a pound a little more of the flesh-formers than whole milk, and about one-half

the fuel value. Prof. Woods said that two quarts and a half or five pounds skim-milk will furnish the same amount of flesh-formers, and have nearly the same fuel value as a pound of round steak. Two quarts of skim-milk have a greater nutritive value than a quart of oysters; the skim-milk has 14 pounds of flesh-formers, and a fuel value of 630 calories, while the oysters contain only 12 pounds of flesh-formers and have a fuel value of 470 calories. The nutriment in the form of oysters would cost from thirty to forty cents, while two quarts of skim-milk would have a market value of hardly more than two or three cents. An oyster stew made of one part oysters and two parts skim-milk would owe its value for nutriment more to the milk than to the oysters. Bread made of skim-milk would have much more of the flesh-formers than when made with water. A lunch or meal of bread and skim-milk is a very nutritious one, and its value as food on the farm is not generally appreciated.

#### SKIM-MILK FOR STOCK.

Before closing, Prof. Woods gave a formula for three rations for milch cows in which skim-milk formed a part.

	Weights Pounds.
Clover hay	10
Field corn silage	30
Corn meal	2
Wheat bran	4
Skimmed milk, 2 gallons	17
Mixed hay	10
Sweet corn stover	10
Corn meal	4
Wheat bran	4
Skimmed milk, 3 gallons	25.3
Field corn silage	30
Timothy hay	10
Corn meal	3
Wheat bran	2
Skimmed milk, 4 gallons	34

L. F. ABBOTT.

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of a well balanced ration is what yields the profit. It takes a given number of pounds of food material to sustain the animal economy. All food over and above that required amount is converted into profit. It takes so many ounces of butter fat to pay the running expenses of a dairy. Every ounce above that amount is converted into profit.

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DETROIT, SATURDAY, APRIL 9, 1898.

This paper is entered at the Detroit Postoffice as second class matter.

**THE DAILY "WORLD."**

**A CHANGE.**

Commencing May 1, the Inter-state edition of the Daily World will be a regular 8-page paper every issue, and the combination price advanced to \$2. All who have subscribed and all who do subscribe between this and May 1 for the combination at \$1.50 (the present price) will get the advantage of the enlarged size for the balance of their time, from May 1, but the order must be received by us before May 1, as the price from that time on will be \$2. Get your orders in before May 1 and save 50 cents.

At the present time it looks as though we might have war. Should such be the case, a daily paper will be almost a necessity. Subscribe now while you have an opportunity of getting a daily cheap. We will send the World alone to present subscribers of THE MICHIGAN FARMER for 75 cents up to May 1, after that, \$1.25. Agents should take advantage of this change and push the combination. It will assist in securing orders for THE FARMER.

Reports from Delaware are to the effect that repeated heavy frosts the past week have caused serious injury to the peach crop, as many of the trees were in bloom.

The statement of the public debt issued April 1st, shows that the debt at the close of business, March 31, less cash in the treasury, was \$1,008,716,351, a decrease for the month of \$1,387,865. The net cash balance in the treasury at that date, after deducting outstanding cash liabilities, was \$226,166,943.

To show the great importance of the cattle business in the western and southwestern states, the statement is made by the Texas Stockmen that the Cattle Raisers' Association represents more actual capital than any other commercial organization in the United States. The organization represents 2,500,000 head of cattle, whose valuation, at a conservative estimate, will reach the sum of \$50,000,000. Then there is the land owned and the pasture leased by these stockmen, which will make up a like sum, making the total investment of members of the Association over \$100,000,000. And these cattlemen at present are enjoying a season of great prosperity, which will make amends for several years of great depression to which they have been subjected.

**THE SITUATION.**

It was expected that the President would on Wednesday last send a message to Congress defining the action he deemed necessary for the government to take on the Cuban question. The whole country was intensely interested, and awaited with anxiety the expression by President McKinley of his deliberate judgment upon the situation. But the country was disappointed, and so was Congress. Instead of a message from the President came the substance of a cablegram from General Lee, at Havana, stating that if the message was sent to Congress before Sunday he would not be responsible for the lives of American citizens in Cuba, as it would take until that day to get them shipped from the island. The message was therefore withheld, and it is announced will not go to Congress until Monday of next week. From the statement by Gen. Lee, of what the result of sending the message to Congress would be, it is apparent that he is acquainted to some extent with the position assumed by the President, and that it must be quite radical or there would not be any fear of an attack upon American citizens. That is the conclusion we arrive at after considering the message of Gen. Lee and the action of the President.

Meanwhile it is announced that the Spanish government is beginning to weaken, and that a change of ministry is probable in consequence. The queen regent is said to have taken the Cuban question out of the hands of her ministers and is dealing directly with the United States minister, Gen. Stewart L. Woodford, and that she is prepared to grant the demands of the United States, though the form of the concessions must be such as not to gall the pride of the Spanish people. Of course this may be merely rumor, but it is quite evident that the Spanish government is more desirous of peace now than at any time since the Cuban question became so dangerous as to threaten war between the two nations.

In the meantime we should wait patiently for the outcome, and whether it shall be peace or war, all good citizens should stand together in upholding the government. Many, no doubt, feel that the President is slow and dilatory, and that too much time has been lost in diplomacy. But we believe that when all sides of the question are known his course will be generally indorsed. It is a fearful responsibility to have the question of war or peace to decide, and that the President fully realizes this responsibility is quite apparent. If some of those who think he is acting too slowly were placed in his position, it would probably cause them to regard the situation very differently. Early in December, when Congress assembled, President McKinley said in his message:

"The near future will demonstrate whether the indispensable condition of a righteous peace, just alike to the Cubans and to Spain as well, equitable to all our interests so intimately involved in the welfare of Cuba, is likely to be attained. If not, the exigency of further and other action by the United States will remain to be taken. When that time comes, that action will be determined in the line of indisputable right and duty. It will be faced without misgiving or hesitancy, in the light of the obligation this government owes to itself, to the people who have confided to it the protection of their interests and honor, and to humanity. Sure of the right, keeping free from all offense ourselves, actuated only by upright and patriotic considerations, moved neither by passion nor selfishness, the government will continue its watchful care of the rights and property of American citizens, and will abate none of its efforts to bring about by peaceful agencies a peace which shall be honorable and enduring. If it shall hereafter appear to be a duty imposed by our obligations to ourselves, to civilization and to humanity to intervene with force, it shall be without fault on our part, and only because the necessity for such action will be so clear as to command the support and approval of the civilized world."

We think the President is trying to carry out in good faith the policy then outlined, and that, while earnestly desiring peace, he will not shrink from war if it becomes necessary in carrying out this policy.

**THE BEET SUGAR INDUSTRY.**

The Department of Agriculture has issued a bulletin regarding the status of the beet sugar industry, its prospects, and what was accomplished the past year. From it we learn that about 2,000 samples of beets were received for analysis at the Department, and that the best results were reported from the states of New York and Michigan. Other states in which reports were favorable were Wisconsin, Ohio, Indiana, Minnesota, Nevada, South Dakota, Wyoming and Colorado. States giving fair results were Iowa, Nebraska, New Jersey and Pennsylvania. In general, it was found that after passing south of the mean isotherm of 71 degrees F. for the three months of June, July, and August, the results were poor. It is found that the belt of territory included between the limits of the isotherms of 71 and 69 degrees may be regarded as the basic belt of the beet sugar industry. The best results are obtained within or north of this belt, other climatic conditions being favorable. Extreme northern limits of sugar-beet culture are determined only by the advent of freezing weather.

A comparison of analytical data with the thermal area shows a remarkable agreement. In states so situated that their northern portions are in the favorable thermal area, while their southern portions are without, comparison of the analyses of the beets grown in the southern, central and northern portions of these states, shows a regular gradation of excellence from south to north.

Experiments were also conducted in the production of high-grade beets. Some of the high-grade seeds obtained at the station at Schuyler during the continuance of the work at that point were found to have sufficient vitality to continue their growth. Other high-grade seeds produced from specially analyzed beets were procured from European growers, and, in collaboration with six of the experiment stations, comparative tests were made of these seeds in various localities. The stations collaborating in this work were Tennessee, Kentucky, Indiana, Iowa, Wisconsin and New York. The best results were obtained from the stations in Wisconsin and New York. The beets which were grown at the New York station were carefully selected for physical properties, and those which reached the standard of shape and size were subjected to individual analyses and preserved for the propagation of seeds for the season of 1898. In all, 800 beets were found to have the requisite qualifications for the production of seed, and these have been preserved during the winter in a silo and are to be distributed this spring to the various stations for seed production. A few of them which have exhibited peculiar strains of excellence have been preserved for the production of a new variety of beets, which it is proposed to call the American Elite. These beets have an average weight of about 30 ounces and an average content of sugar of 19 per cent. The purity of juices in similar beets was found to be about 85. These beets, having shown these remarkable variations from the standard in size and sugar quality, are evidently fitted to produce a new variety of beets better suited to American farmers than the standard beets of Europe. It is the intention of the Department to endeavor to establish a variety of beets of this kind which shall have at least a third greater weight than the standard sugar beet of Europe without losing anything in sugar content or in purity of juice. The immense advantage of such a variety of beet for American growers is easily seen.

The report contains a chapter on the

value of the sugar beet and the beet pulp as cattle food, giving the chemical composition of each, the ratio between the nutrients, and its general value as a producer of milk and fat and as a sustaining ration.

The report closes with a chapter on statistics of sugar production in this country during the year 1897. During the season nine factories were in operation in the United States, namely, at Alameda, Los Alamitos, Watsonville and Chino, Cal.; Lehi, Utah; Eddy, N. Mex.; Grand Island and Norfolk, Neb., and Rome, N. Y. Forty-one thousand two hundred and seventy-two acres of beets were harvested, with an aggregate weight of 389,685 tons, a yield of almost 9½ tons per acre. This is less than the average in Europe, but with more scientific agriculture and judicious fertilization the yield in this country can doubtless be brought up to, if not above, the average of the best fields of Europe. The careful experiments of the New York Experiment Station, at Geneva, with beets grown in collaboration with the Department of Agriculture, resulted in an average yield of over 16 tons of high grade beets per acre.

The total amount of beet sugar made in the United States during the year 1897 was 90,491,670 pounds, an average of 232 pounds per ton of 2,000 pounds, or 11.6 per cent of the weight of the beets. This is a less percentage than is obtained in Germany, but, considering the newness of the industry in this country, it is sufficiently encouraging. Reliable information shows that there will be in operation in the United States during 1898 seventeen factories, new factories being located in Utah (1), Oregon (1), California (4), Michigan (1), and New York (1). It is safe to say that at least 80,000 acres will be planted in beets during the season of 1898. The yield of beets may be expected to be nearly 800,000 tons and of sugar about 180,000,000 pounds. These estimates should be reduced somewhat to represent the proper output of beet sugar in the United States; they are sufficient, however, to show the rapid growth of the industry, which will experience an enlargement of not less than 70 per cent during the coming season. The percentage of beet sugar produced in the United States during 1897 to the total consumption was only 2½, but the prospects are that in 1898 it will be nearly 4 per cent of the total consumption, which now amounts to about 2,000,000 tons annually.

The American Iron and Steel Association publishes complete returns from the manufacturers of pig iron, and the figures given out show that the output in 1897 was the largest on record. It amounted to 9,652,680 tons, an increase of 1,029,553 tons, as compared with the previous year. The value, however, was \$50,000,000 less than the output of 1890, which was half a million tons less than in 1897. The total value of the pig iron produced in 1890 was \$151,200,410, an average of \$16.50 per ton. The total value of the product in 1897 was \$106,129,480, which is an average of about \$11 per ton. The immense production and low price of pig iron is doing much to stimulate manufacturing in all lines in which iron and steel are used, and leading to the employment of these metals in many ways as a substitute for wood. The possibilities of these metals are being better understood from year to year, but development in this direction has only begun. The place so long held by Michigan lumber will hereafter be held by Michigan iron, so that the loss of one product will be made good by the development of the other.

## IT WAS SHORTSIGHTED POLICY.

A cable dispatch received from London, England, this week, says:

"The shipbuilding boom is unprecedented, as can be gauged from the figures of the Clydebank, from where 40,000 tons were turned out in March. Orders were booked in March for 120,000 tons, and the work now on hand and ordered totals up 625,000 tons, almost double the whole output of 1897."

To this boom the United States has unwillingly contributed a number of millions of dollars. Under the stress of a probable foreign war her representatives have purchased a number of ships either just completed, or about to be, for foreign nations, and these nations have been ordering others rebuilt to replace those sold. Undoubtedly good prices had to be offered for these ships to induce their owners to sell, but it was a time when haggling over prices could not be indulged in. The great mass of the people were demanding that the government intervene in Cuba, and that meant war. The United States navy was weaker than that of Spain, her coasts were but imperfectly provided with defences, and large purchases of guns and munitions of war, as well as ships, had to be made at once. There was no time to build the latter, and those who had them for sale could command the market. It has been a costly experience, and the lesson taught should be remembered.

The country should never again, under a mistaken notion of economy, permit itself to become as defenceless as it was when this war scare first began. The economy that saved the few millions a year necessary to place the navy and army in condition to defend the government and its citizens from foreign aggression and insult, is necessarily followed in time of danger by heavy expenditures. Those ships purchased from foreign nations should have been built by ourselves and the material and labor necessary purchased from our own citizens. A few millions expended judiciously each year, not entailing any perceptible burden upon the people, would have placed the navy in a position to command the respect of other nations, and insured good treatment for American citizens and proper protection to American interests. It would also have furnished one of the strongest peace arguments which can be advanced by any nation.

Neither the army nor navy of the country is what it should be when the wealth, the large interests, and the commerce of the nation are considered. They should be built up carefully and judiciously, so as to be as effective and yet as inexpensive as possible. War is always possible to a nation with the extended interests and large territory of the United States, and to be unprepared is to invite trouble, not to prevent it. We note that a dispatch from Washington states that claims against Spain aggregating \$16,000,000 for injury and loss incident to the war in Cuba have been filed with the State Department by the citizens of the United States residing in that country. They cover claims for personal injury, imprisonment, loss of stock, burning of sugar plantations, etc. If these claims are just, and no doubt a large part of them are, how are they to be collected if this country is not in shape to enforce their payment? And while it is Spain to-day, may it not be Germany, France, Great Britain or Russia a few months hence? If our citizens are to be protected and justice demanded for them at the hands of other nations, the government must be able to back up its demands by force if necessary. If it is not, what nation will pay any respect to its demands, or to the rights of its citizens. Let us have a strong navy, a good system of coast defences, and an army of sufficient size to command respect, that war may be averted and peace maintained with honor.

For The Michigan Farmer.

## THE ADULTERATION OF WHEAT FLOUR—No. 1.

BY R. C. KEDZIE.

The adulteration of wheat flour by mixing it with some material foreign to the wheat berry, and thus lowering its food value, is a matter of great importance to every class of our citizens—to the millers, to the wheat raisers and to the consumers of wheat products. First or last everybody is touched and injured by this fraud. It is a maxim in every mouth "bread is the staff of life." The prayer of childhood is "give us this day our daily bread;" the demand of adult life is for "bread which strengthens man's heart." It is the food of civilized man. He eats wheat bread because he is civilized, and he is civilized because he eats wheat bread.

In wheat we find the proper proportion of the nitrogenous, the carbonaceous, and the mineral elements required to make a balanced ration for an intellectual animal. If a man, for variety in his food, substitutes some starchy material like potatoes or rice, he balances this by beef, or eggs, and thus returns instinctively to nature's balanced ration for man as found in the wheat berry.

The physical basis of animal life is the food he eats. Any cause which seriously and continuously changes the nature of his food will correspondingly modify the life of the animal. The mental activity and force of a man are promoted by a diet rich in albuminoids (including gluten), while life is on a lower plane with those living on food deficient in the nitrogenous materials. The Germans have a proverb, "bread is the food of the brain-worker and starch the food of the hand-worker."

One distinctive quality of wheat, in which it differs from all other grains, is its capacity to make light or raised bread. No other grain can produce flour which approaches wheat flour in this respect. Oat meal and corn meal make nourishing food, but cannot make a light loaf. A Johnny cake or barley bannock is only palatable when eaten hot, and eggs are often incorporated to impart some leavening quality. To mix with wheat flour the flour of any other grain, and especially the separated starch of any grain, is to lower the food value of the flour and diminish the distinctive properties of wheat flour. The adulteration by addition of 10 to 30 per cent of such foreign material inflicts a corresponding loss upon the consumer in regard to the distinctive good qualities of wheat flour. In all this discussion I wage no warfare against Indian meal as such. It is good in its place, but its place is not in the flour barrel.

There are three classes who are injured by flour adulteration: First, the honest millers; second, the wheat raisers; third, the consumers. I propose to devote a paper to each of these classes.

## FLOUR ADULTERATION AND THE HONEST MILLERS.

I have no statistics to show the amount of adulteration carried on in this country. So far as I can learn it is not carried on in any mill in this State. I wrote to one of the best millers in the State asking for samples of the adulterants and adulterated flour, but he replied that he could not furnish any sample, but suggested to write to parties in Kentucky and Tennessee. "One miller voluntarily told me that he was mixing in 270 barrels per day of corn flour into his wheat flour, and that a profit on a barrel of corn flour so mixed was \$2.50 to him or his concern." A profit of \$675 a day! He added: "This mixing of flour has almost ruined my Southern trade. The only way I can get any orders for flour at all is to sell at cost or below cost, while the other fellows are making big profits."

I wrote to an old friend in Tennessee for information, enclosing \$5 to buy a barrel of adulterated flour for examination. He replied as follows: "Yours of the 21st, enclosing a \$5 bill, came duly to hand. I at once stepped to the telephone and called up my friend — of the — mill at this point. From him I learn that the adulteration of flour with corn meal is practiced universally, and ranges from 10 per cent to 30, 40 and even 50 per cent, according to the wheat used, the hard winter wheat of the Northwest standing the highest figure."

He enclosed a letter from this miller, from which I make the following extracts: "You may say to Prof. Kedzie that the flour we are shipping him is made by using about 75 per cent of

soft red winter wheat, raised here in Tennessee and Kentucky, and about 25 per cent is hard winter wheat from Kansas. The flour produced by this mixture of wheat has had added to it about 15 per cent of corn flour, made from pure white Ohio river and Illinois corn. We reduce the corn to grits and pulverize the grits, taking the glutenous as well as the starchy part of the corn with which to make the corn flour. \* \* \* We will ship a barrel to Prof. Kedzie next week."

A letter (enclosing \$5) was sent to a large milling establishment in Kentucky and received a prompt reply, from which I make the following extracts: "We have experimented along the lines you mention, and take pleasure in sending you a barrel containing a blend of 10 per cent corn flour.

\* \* \* We are able to put this flour on the market at nominally 25¢ a barrel less than absolute pure winter wheat flour. Of course we give our customers the choice of ordering which they please, and find large lots of them, especially in the South, taking this blended flour in preference to the pure goods, owing to the economy and at the same time satisfaction. We, of course, should prefer that our name should not appear publicly in connection with this matter for reasons which are perfectly obvious to you."

From the facts here given, obtained from the largest milling establishments in Tennessee and Kentucky, from information derived from our millers, and that picked up in the State Millers' convention in January, it appears that the trade in pure wheat flour in the Southern states is either lost to Michigan millers or badly demoralized. The ready acceptance at the South of flour largely adulterated with corn flour may be explained in two ways: First, The consumption of corn meal is much larger than at the North. A Mississippian, who had been a prisoner on Johnson's Island, complained about being starved while a prisoner. "In all the months I was a prisoner on the island I never had a bite of cohn (corn) bread—nothing but wheat bread!" Second, The very general use of hot biscuit instead of raised bread gives little chance of disclosing the weakness of the flour, because of the relative deficiency of gluten from addition of materials containing no gluten, such as corn meal and cornstarch.

A consideration of the probable outcome of a conflict between common honesty on the one hand and the prospect of large gains on the other hand, with hope of concealment of the fraud from exposure and the assurance that the other fellows are doing it "and just coining money," that "you must do it or go to the wall"—will help us to form an opinion in many cases. A large number of millers will refuse to sell honor for gain, but the strain will be severe when they find that profit has disappeared, that they can only carry on their business at a loss because of dishonest competition, and their capital in mills and fixtures may be sunk in the strife against rascality.

The trade in honest flour in the South seems to be lost for Michigan millers. The trade in the East is threatened. A miller writes me that prices in New England are cut so low that he suspects that adulterated flour is invading that section. A flour merchant in Vermont sent me two specimens of flour for analysis, requiring a statement whether these flours contained anything not derived from the wheat berry, because he would not sell them unless they were pure. They were both Michigan flours, and both pure.

The suspicion has crossed the sea that American flour is adulterated. If that suspicion becomes a fact our flour trade in Europe will close. I have before me a letter from a firm in Glasgow to a miller in this State, closing as follows: "So far as we have gone yet, we have no adulterated flour, and we trust never to have any. The first lot would be the last."

Special Commissioner Plenipotentiary John A. Kasson, in writing of the flour trade, says: "It is the policy of all countries to import raw materials for their own manufacture rather than to import the final product." Europe is glad to get our wheat, but if Germany and France can find good reason for excluding our flour because of adulteration with corn products we know how promptly they will act. What would then be the future of American milling? What will be the influence of derangement of foreign trade on the many industries connected with milling and the exportation of flour?

The effect on the farmer of exporting the surplus wheat instead of flour, thus

losing the by-products of the mill, I will save for a future article.

I have said enough to show that adulteration of wheat flour by corn products is extensively practiced, is rapidly spreading and must be controlled if not arrested in order to avert disaster to important American industries. What is the remedy? Secure from Congress a law compelling the branding of every package of adulterated flour to show its true composition. In this way let each product stand before the world on its true merits. This would be just and fair to all parties and no honest dealer can complain of its working.

A bill to this effect is now before Congress, and influence to secure its passage should be brought to bear on members of that body.

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**This Watch Free** to examine. Having recently purchased the entire stock of watches and hardware, consisting of gold and silver and gold-filled cases, we will sell the entire lot at prices never before heard of in the watch trade. Among the stock are 8,780 AMERICAN CASES and ATTACHES in SOLID GOLD FILLED CASES which sell at \$1.00 each. The dozen to private parties or to the trade, at the unheard-of LOW PRICE of \$3.95 each. WE WARRANT THEM TO BE AMERICAN STEEL MOVEMENTS, IN SOLID GOLD FILLED CASES, ADJUSTED TO FOUR POSITIONS, and to be perfect timekeepers. The cases are in SOLID GOLD FILLED, BEAUTIFULLY ENGRAVED and WAR RANTED 20 Years. This Watch is a bargain at a lifetime's purchase. Any one who can show them, for from \$15.00 to \$25.00 each. STEM WINDERS AND SETTERS. With each watch we send one GUARANTEE for 20 YEARS, and a lifetime's FREE REPAIRS.

that you show it with the watch you purchase to your friends and acquaintances. These watches keep accurate time. Think of an American Style Movement Watch, in Solid Gold Filled case, and guaranteed for 20 YEARS, for \$3.95. That is a great value. You should order at once. Watch speculators can make money buying by the dozen to sell. All are elegantly finished and guaranteed perfectly satisfactory in every respect. Don't forget to state whether you want plain engine turned or elaborately engraved case, and also if hunting or open face. In solid gold cases, \$15.00 each. In solid gold filled cases, \$25.00 each. In solid silver cases, \$35.00 each. In solid silver filled cases, \$45.00 each. In solid gold filled cases, \$55.00 each. In solid silver filled cases, \$65.00 each. In solid gold filled cases, \$75.00 each. In solid silver filled cases, \$85.00 each. In solid gold filled cases, \$95.00 each. In solid silver filled cases, \$105.00 each. 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## The Household.

CONDUCTED BY MRS. ELLA E. ROCKWOOD.

We should be pleased to have any of our readers who take an interest in household topics, send in their views and opinions upon any subject which is under discussion, or which they wish discussed. The invitation is general, and we hope to see it accepted by many. Address all letters for The Household to Mrs. Ella E. Rockwood, Flint, Mich.

### EASTER.

After the gloom of winter—  
After the darksome rain—  
After the days of wind and storm  
The flowers come again.

After the night of anguish—  
After the heart's deep throes,  
After the troublous storms of life,  
Shall come surcease of woe.

The hours of pain and sorrow,  
Can linger not for aye;  
Some Easter morning's sunshine  
Shall chase the clouds away.

O, Hope, thou bright winged angel!  
Without thee all were gloom.  
But 'mid night's anguish deep and long,  
We see thy flowers bloom.

### HOME CHATS WITH FARMERS' WIVES.

#### STAY WHERE YOU ARE.

There are so many things I want to talk about that I scarcely know what to say first; but, as at this time of year there are always some who are becoming dissatisfied and think of making a change of residence, I want to say a few words to these should there be such among our readers.

It is frequently the case that a family decides to "pull up stakes" and move to some other locality. They anticipate a benefit in the change, of course, or they would not make it, yet how often the change is contrary to what they expected, and ere six months elapse they wish themselves back again. It is impossible to realize just what the new circumstances and surroundings will bring, and no matter how highly recommended a locality may be it is not to be expected that it will suit everybody. Especially is this true where associations are strong about the old home. It will mean more than we can realize to leave friends and relations and go away where every face is a strange one. Then as never before we will appreciate the old home friends.

\* \* \*

Then the change of climate, if the removal is one of considerable distance, is not always what we were led to expect. Even far-famed California does not suit every one. I have questioned men who have traveled our fair Republic over from east to west, from north to south, as to the most desirable location, and the reply almost invariably has been, "Well, Michigan is about as good as any place I've seen." And I believe this is true.

Think of the homesick wives and mothers, (yes, and the homesick husbands and fathers, too, although they are not willing to acknowledge it) who have left home and kindred to roam the wide west in quest of an abiding place! Think of the lonely days and tearful nights when only disappointment was met with after great sacrifice. The little all had been spent in moving and it was impossible to go back, even had not pride held them from such a course. Think of the years which must elapse before the young wife can again lay her head on mother's breast and feel the pressure of her loving arms about her neck. Yes, it may be for years, but it may, too, be forever. Far from mother, father, sister, brother, the companionship of loved ones,—these things which go to make life worth living,—think of all this before you decide to break up and move away. Life is so short, at best! Why separate from those bound to us by ties of love and relationship?

\* \* \*

Of course the young wife will follow her husband where-so-e'er he will and help him to make a home. Yet a man should hesitate long before requiring such a sacrifice at her hands. So I say, stay where you are. Make the very most of your opportunities and success will crown your efforts right here in Michigan as well as any where else, and unless you are absolutely certain the change is for the best, all around, do not take the wife and little children and launch out upon untried seas.

## An Easter Greeting Unto All

### A NEW MEMBER.

Dear Household, will you welcome a new member? (Most assuredly.—Ed.) I have been a reader of the Household for some time, have been very much interested in the different discussions, especially about the care and management of children, as I have two healthy fun-loving boys to guide through to manhood. I think we should guard our boys as carefully as our girls and gain their confidence so they will come to mother for advice the same as our daughters. Teach them that their thoughts and actions should be all that is pure and good, such that mother would approve of, and they will make men that she will be proud of, glad to say "that is my son."

Mrs. Rockwood was at our institute and spoke about some overworked farmers' wives. I think that is where mothers make a great mistake. They think it a great saving to get along without help in the house. Now I think, take it on the average farm with, we will say, two children, but there are often more, a hired man, milk of five cows to care for, and in the place of saving, it is an actual loss if she does without help. We all know we can do just so much and no more. We know where one pair of hands must do everything that many things must be slighted—for instance, the milk not skimmed or the cream not churned at just the right time, the garment beyond repair for want of a few stitches at the right time, the fruit gone to waste for want of time to care for it. There is no time to set the hens, nor to take care of the ones that steal their nests and come off with one, or perhaps a half dozen, chicks. These are all little things, of themselves, but amount to considerable in the course of a year. Then we have said nothing about the doctor bills, which Mrs. Grace speaks of, nor the long weeks of suffering, and (in many cases that we all know of in our own circle of friends) the little children left without a mother. Others may take your place in the home, they may get the meals, churn the butter, and keep things moving the same as you did, but they can never do by your children as you can. How often we see a girl or boy gone astray and hear the remark, "He has no mother," or, "If their mother had lived they probably would have been different." Well, I must stop, or this, my first attempt at writing for the Household, will land in the waste basket. If it should escape you will perhaps hear again from

THELMA.

### ONE WOMAN'S WAY OF TRAINING CHILDREN.

Teach them the lesson of obedience at an early age if you would succeed in governing them properly. With mine (and I am the mother of four) I did not neglect to begin as soon as they could understand, before they were two years old, and they knew when mamma said no, or yes, that it meant just that. I have never experienced any trouble with them and they respect me all the more for it, and will respect the laws of citizenship the better for it also.

So often we hear the fond mother say: "Oh! I can't have the heart to punish them when they are so little!" Then is the time for you to act, for if the duty (and it is a duty) is neglected, they will very soon get beyond your control and you will find it impossible to govern them. We all know how disagreeable an ungovernable child is; and how ridiculous it makes the parent appear when they make an attempt to govern and fail.

Another thing I would recommend, and that is, always be truthful with the children. I have always been very careful never to make a promise that I could not fulfill, and they have all confidence in me and I can trust them, for I have taught them to be truthful.

Another example we must set for children if we would have them grow up to make good citizens, and that is not to quarrel, either with husband, or neighbor, or with any one. Teach them that it is disgraceful. I believe in righteous indignation and do not

think it one's duty to bear insult without resenting it, but people who live above quarreling are not apt to be subject to insult. It always takes two to promote discord. Do not mistake nagging for governing. I have seen women who would nag the whole family from morning until night and not one of them had the slightest respect for anything she said.

Lansing.

ESTELLA.

### ALLITO'S BAKING CRITICIZED.

"She must owe herself a grudge" was the remark of my "other half" after I read him Allito's weekly baking for a family of three. I laughed and said I must write that to the Household and let them know there is one man whose appetite needs no catering to. So giving him a kiss on the tip of his nose I seated myself at the writing desk.

Allito reminds me of a neighbor who is always fussing for her table. I have never found her resting. When not busy on her feet she is busy with her hands, and she is never well, either. She does it for her own gratification. She likes to see her table loaded. Now, I don't. I like to see a table set neatly and enough food on it to look inviting, but I don't want the tablecloth hidden from sight entirely. I have a relative who likes to load her table, and if there happens to be a vacant spot she will put on the cracker dish and syrup cup. Just think of it! To get rid of that amount of baking each one of Allito's family must eat two cookies, a piece of pie and a piece of cake at each meal, besides the meat, potatoes, bread and butter one with a healthy appetite ought to want. I must say her family must be like the Irishman's boy, "little, but tough."

I put up plenty of fruit and tomatoes, indeed my boys like nothing better than mashed potatoes (with plenty of butter and cream in) and tomatoes, when they come from school. When apples are plenty I do not put up so much fruit, for we are very fond of apple sauce. I have heard so many say, "our men won't eat apple sauce." Well I have seen apple sauce I did not like to look at, much less eat. I have been a farmer's wife for a quarter of a century, and we have from one to three men, and I have never had one

refuse apple sauce. Not only did they eat it, but eat all I could put in the dishes.

There are so many nice, simple dishes, easy to prepare, that are so much more wholesome than so much pie and cake, that it is really a crime to bake so much. Bread we must have of course, but we eat many a meal without pie, cake or cookies and never miss them either.

Jannette says we must never punish for carelessness or thoughtlessness. But what can one do when repeated telling in a kind way does no good? When I was a girl my mother taught me to gather up the knives and forks separately from the spoons; but in my carelessness I would put them together. She had told me not to do so a hundred times I dare say. Finally, one day, she gave me a sharp slap for doing it. I was dreadfully angry, but I was never saucy, so said nothing, but I never put the spoons with the knives and forks again.

A KNEW KOMER.

### SOME USES FOR BAKING POWDER CANS.

I will tell of some ways to use the empty baking powder cans which are usually so plenty. Keep one with a small quantity of lard in it, with a stick four or five inches long which has a clean white rag wound on one end to grease the baking tins with. It is very convenient, warms quickly, and saves washing the hands many times. Another use for the pound cans (smaller ones would hardly answer) is to keep some of them in which to bake the Graham bread. And right here you will find the grease stick most convenient. Fill the cans half full, grease the covers and place them on, and bake one hour or more in a moderate oven. Leave the loaves in the cans about three minutes after removing from the oven, and they will then slip out easily. There will be no hard crust and the little round slices are so pretty. The children like them in their lunch pails and I think the men would not object to them either.

Of all the winter blooming window plants I think I love Primroses best. They remind one of spring and the woods, and they do not mind the dark, cloudy weather, but go right on sending out their sweet blossoms for weeks when other plants bloom not at all because of the want of sunshine.

V. A. L.

Several replies to J. E. B.'s request for a recipe for making bread have been received. A few of those first received have been published in the Household, and others will follow from time to time.

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## FLOWERS IN WINTER.

Surely the flowers are messengers of cheer in the dark, gloomy days of winter. It seems to me that bulbs are about as satisfactory as anything for winter blooming. I tried only a few this year, would like to have more another winter. I had a beautiful stalk of white hyacinth in bloom in February. I took great pleasure in watching the plants and wondering what color the blossoms would be. I also had several clusters of Lily of the Valley. Our windows for plants are so far from the stove that although the foliage is nice and thrifty there are not many varieties that will bloom freely. Besides the flowers mentioned I have two or three varieties of Begonias, which bloomed in February, and a Carnation also.

As I stepped into the home of a friend one cold day in February I was greeted with the fragrance and delicate beauty of the Fresias. Before being seated I walked to the bay window to gaze on its beauties. There were two or more jars containing Fresias; such lovely clusters of blossoms I never saw outside of the catalogues. Then there was a large Calla bud beginning to unfold, several Hyacinths, with large spikes of buds; a Cineraria, with its brilliant cluster of blooms, and delightful Heliotrope. There were many other plants with either buds or blossoms. That window was certainly a "thing of beauty," and a joy for the present, at any rate.

CLARA.

## MORE ABOUT CARPET RAGS.

In E. J. D's advice about carpet rags, February 19, I notice an item stating that for orange on cotton, the rags having been already dyed yellow, must be put through a "hot, strong lime water." I have known several housekeepers to make a perfect failure on this very point, their rags coming out of the lime water nothing but a dirty white, while I had a vivid orange, scraps of which lay in the grass of the back yard all summer exposed to sun and showers and as bright as ever. The secret is this: There is a marked difference between the two preparations known as "lime water," and "strong lime water." The simple lime water is what you want for your orange color. I prepare it in this way: Take one pound of stone lime; slack in nearly a pailful of water, stirring occasionally until it settles clear. Carefully pour off this clear liquid, adding to it clear water enough to cover your goods. Have it not hot but warm enough to penetrate the goods which you are to work around in this lime bath for a few minutes until you secure an even color. A good, bright copperas color, treated to a lime bath in the same way, makes a good orange, but not quite as bright as that above described.

The rule for Japonica brown given by E. J. D. makes a beautiful dark tan, and in no way injures the strength of the rags or warp. Another brown, somewhat cheaper, and quite as durable a color, is done as follows: For five pounds of rags take of catechu one-half pound; bichromate of potash, two ounces; blue vitriol, two ounces. An iron kettle will do for this dye, into which put soft water enough to cover your goods well. Heat this up, making of it, with the catechu and vitriol, a dye in which simmer the goods slowly one and one-half hours, turning over and stirring about occasionally. Now wring out of the catechu dye; and, having the bichromate dissolved in as much more water, pour it quite warm over all the skeins at once, working them around in this bath fifteen minutes, then rinse thoroughly and hang up.

As bichromate of potash is difficult to dissolve, it is an advantage to first pulverize it. Inasmuch as it ruins tin, a stone jar or a granite dishpan is the utensil in which to prepare this part of the dye.

Everyone, I suppose, knows that for green the rags are first colored a palish blue and then put into a yellow dye. In case different shades of green are wanted the difference can only be made in the blue dye.

Here is a true blue, that will not fade or rot the goods in coloring, and will do four pounds of cotton dark enough for a nice green: Prussian blue two ounces; oxalic acid one ounce. Pulverize together and dissolve in hot water sufficient to cover the goods. Dip the goods in this until you have the desired shade; then wring and work thoroughly in quite warm alum water, after which rinse well to wash out the alum.

As far as my experience goes, none

of the advertised dyes for cotton are proof against sunlight, excepting Cushing's scarlet and turkey red; so if we want permanent colors we must make them.

To beginners I will say, always sew your rags before coloring and reel in skeins of not more than sixty threads each, tying, but not tightly, in four equi-distant places. If your skein is just one yard long on the double then each thread of rag is two yards, and if your carpet is to be one yard wide and you have a certain number of threads in every skein for your fancy stripe, it is easy to calculate how much of each color you must prepare, always allowing a little for waste; so many threads of that particular color to the stripe; so many stripes to the yard, and so many yards to the whole piece of that kind.

All rags to be dyed must be perfectly clean, and before going into the dye must be thoroughly wetted in water and wrung as dry as possible. Rags designed for yellow, pink, red or blue should always be a clear white.

J. L. CHAPIN.

## HUMAN SPONGES.

Human sponges, that is what we are! Like the fibrous, compound animal that adheres to the shells and rocks in the ocean's bed, so do we cling to those whose natures have greater abundance than our own—cling until we get our fill—then leave them to recover the loss, even as did we.

At the close of a day, when I had gleaned a rich harvest from intercourse with an intellectual woman, I said: "How can I repay you for the hope, the courage, the mine of ennobling thought you have opened to me. I shall always be a wiser woman for these few hours." A thoughtful smile rested a moment upon her fine face, then she said: "You owe me nothing. We are feeding while we feed. You may have been strengthen-

ed, so have I. It is these contacts of mind with mind, soul with soul, that maintain for us our equilibrium."

In the varied, exacting conditions that bear upon us we often find some of our forces depleted. Instinctively we are guided to the "hand that heals." It may be to the mansion where luxury abounds; it may be to the cottage where poverty abides. The quality of mercy is alike in either case.

Life's vexations often leave the heart empty, desolate. Then we yearn for those so beautifully, so graphically sketched by Henry Drummond. Those of broad charity and abounding love and never go we empty-handed from their door. Thrice blessed are these people. A barren waste would humanity be without them.

Undue seclusion leads us to the want of social pleasure. We know the places where these abound—we are sure of our welcome—we partake of that "leaven" that lightens the solid mass which we have become, and learn that within our own reach much of the sweetness of life is awaiting our acceptance.

"Give and take" is the game of life. The one who believes he is sufficient unto himself cherishes a delusion and knows not of himself. The want may be philosophical, may be affectional, may demand baked beans—give of each and all, for the day may come when all of these you will need.

Flint.

LUCY SWIFT.

## OUTINGS.

Dear sister readers of the Household, may I ask how many of you have taken the outing this winter that you denied yourselves through the busy months of the past summer? Spring and summer are very busy seasons here, consequently there is small chance for getting away at any time during ten months of the year. But I

consider it worth the while, if I do have to take it in the winter. I have tried it and I say take a vacation by all means, if only for the sake of the pleasure of the coming home, for really some of us housewives do get to thinking sometimes that home is the dullest, humdrum old place in all the world. But just take the right medicine, dear sisters, and you will get immediate relief. Perhaps some of you will like to know how Uncle Moses and the boys kept house ten days alone. Well, I will tell you what I know about it. I did a nice lot of baking for them before I went away. It was cold weather, when such things keep well. I do not blush to have it known that my husband is a good cook, and he had a splendid dinner awaiting me on my return. The boys tell me that they lived on what they term the "top shelf" while I was away. I found everything clean and in order, although I heard faint whispering between the boys that they had a carpenter shop in the kitchen and did just as they liked while Ma was gone.

Now, for fear I shall wear out my welcome, I will close for this time; but a word or two more. You dear sisters who are tired of home cares, tired of looking at the same old furniture, same old objects that meet you on every side, same faces you see 365 days in a year, just go away for one week, out of sight and hearing of it all, and note the effect. You will be surprised, if I mistake not, on your return. You will gladly welcome back the cares you left behind, and your home will look the loveliest place on earth.

UNCLE MOSES' WIFE.

A correspondent asks some one to tell how to remove hulls from beans in cooking. He thinks he saw the process described some time ago in the Household. Who knows?

A little sugar in the stove polish will make it last much longer.

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## Legal Department.

CONDUCTED BY EARL D. BABST,  
56 Moffat Building, Detroit.

Best way to foreclose mortgage.—X. Y. Z., Kalamazoo, Mich.—Which is the quickest, cheapest and best way of foreclosing mortgage?—Much depends upon the mortgage to be foreclosed. Foreclosure by advertisement is cheaper, but foreclosure in chancery better.

Assignment of mortgage does not require wife's signature.—G. R. T., Summerville, Mich.—I do not answer questions on domestic infidelity. 2. Can a man discharge a real estate mortgage or sell it without his wife's signature or without her consent?—A mortgage may deal with a mortgage as he pleases without his wife's signature to any sale, release or assignment he may make, as he has only a chattel interest. The mortgagor may pay a mortgage without the consent of his wife.

Bicycles same rights in highway as other vehicles.—Subscriber, Elmhall, Mich.—I wish that you would publish the laws concerning bicycles running on the highway when meeting teams. Has the vehicle a right to one-half of the beaten road?—There are no statutes regarding the rights of bicyclists in the public highways, but bicycles are generally recognized as having the same right as other vehicles. The statutes provide that when two vehicles travelling in opposite directions meet on a highway each shall turn "seasonably" to the right of the middle of the travelled part of the road.

Remedy Against Trespass of Fowls—Damages.—F. R., Owosso, Mich.—A and B have places on opposite sides of the road. B has his place fenced in and raises small fruit, onions, etc. A has no fences and raises 50 or 60 turkeys each year. The turkeys fly over and get into B's garden patch, and it is a great annoyance to B. What proceeding will B have to take to make A keep his turkeys on his side of the road and off B's land?—B may drive the fowls off his land, but may not kill them. He may maintain a suit in trespass against A for damage done, and if the trespass continues he may secure an injunction against A.

Taxes recoverable under forfeiture of land contract.—T. C., Manchester, Mich.—A and B own a piece of land which had been surveyed but no line fence built. A sells his interest to C. C gets possession and immediately proceeds to build a fence on the line as shown him by B. After 15 years of peaceful possession by C, B claims that the line should be six or eight rods over on C's land. In the 15 years C has cleared and improved his part of the land. Can B compel C to move the fence? Will 15 years peaceful possession of land give a person a title?—Fifteen years of continuous, visible, adverse, open, notorious and hostile possession gives good title in Michigan. In so much as B originally located the line and had not questioned it in the period named, he would be stopped from disturbing C's title.

## The Markets.

### WHEAT.

After a strong market for several days there was a drop in futures on Wednesday, and a general decline in both spot and futures Thursday. The increase in the visible supply was unexpected, a large decrease being looked for, and this has helped weaken the market. The weather has been unfavorable the past week, and the condition of the wheat on the ground has deteriorated to some extent in consequence. Upon the whole, however, prospects are excellent, and it looks like a heavy yield this season. No old wheat should be held over. The world will not be as short of wheat next year as this, nor values as high. The foreign demand keeps up well.

The following table exhibits the daily closing sales of spot wheat in this market from March 15 to April 7, inclusive:

	No. 1	No. 2	No. 3	White	Red	Red.
March 15.	94	95%	92			
" 16.	93	95	91%			
" 17.	93%	95%	92%			
" 18.	95	97	93%			
" 19.	94%	96%	93			
" 20.	94	96	92			
" 21.	94%	96%	92%			
" 22.	94%	96%	92%			
" 23.	93%	95%	91%			
" 24.	92%	94%	90%			
" 25.	92%	94%	90%			
" 26.	92%	94%	90%			
" 27.	93%	95%	91%			
" 28.	92	93%	89%			
" 29.	92	94	92			
" 30.	92%	94%	90%			
" 31.	92%	94%	91%			
April 1.	92%	94%	91%			
" 2.	93%	95%	92%			
" 3.	94%	95%	92			
" 4.	95%	96	92%			
" 5.	95%	96	92%			
" 6.	95	96	93			
" 7.	93%	95%	91%			

The following is a record of the closing prices on the various deals in futures each day during the week:

	May.	July.	Aug.
Friday	95	80	77%
Saturday	95%	81	78
Monday	96%	81%	78%
Tuesday	96%	82%	79%
Wednesday	96	81%	79
Thursday	95%	80%	77%

The visible supply of wheat on Saturday last in the United States and Canada was 30,223,000 bu, as compared with 30,061,000 bu

the previous week and 38,612,000 bu at the corresponding date last year. The increase for the week was 162,000 bu.

The Spanish government is reported to have authorized the importation of 60,000,000 kilograms of foreign wheat to meet deficiencies.

The French senate has refused to remove the duties on foreign wheat for a short time to enable importers to bring in supplies to meet crop deficiencies.

According to Broomhall, the total shipments of breadstuffs from all exporting countries the past week were as follows: America, 3,688,000 bu; Russia, 2,292,000 bu; Roumania, 616,000 bu; India, 336,000 bu; Argentina, 1,256,000 bu; various, 520,000 bu, a total of 8,708,000 bu.

Argentina has shipped 12,224,000 bu of wheat since January 1. For the same time last year the shipments were 1,559,000 bu.

France's requirements of wheat for the balance of the crop year is estimated at 30,000,000 bu, over the stocks held in that country, and French dealers are said to be buying heavily in the Chicago market. Leiter is said to have sold one French house 2,250,000 bu the past week.

A great effort is being made to ship wheat early from India so as to take advantage of present high prices. It is expected values will decline materially under liberal Indian shipments.

### DAIRY PRODUCTS.

#### BUTTER.

The butter market shows a marked improvement the past week, both in tone and values. For some reason receipts have run lighter, and this is especially so with prime dairy, which is in demand at full current rates, and even at an advance over them in some instances. Quotations range as follows: Creamery, 19½@21c; fancy dairy, 17@18c; fair to good dairy, 14@16c; common dairy, 12@13c; low grades, 8@9c per lb.

At Chicago there has also been an advance in the finest grades, both of creamery and dairy, and the market is reported steady. Quotations in that market on Thursday were as follows: Creameries, 20c; firsts, 18@19c; seconds, 13@14c.

Dairies, 18c, 17c; firsts, 13@15c; seconds, 12c. Ladles, 18c, 12@13c. Packing stock, 11@13c; roll butter, 12@12½c.

The New York market is firm and active, with a strong advance in prices. Both stocks and receipts of good table butter are light, and there has been a general improvement in values in consequence. Quotations in that market on Thursday were as follows: Creamery, Western, 18c, 17c; do firsts, 20½@21c; do thirds to seconds, 17@18c; State dairy, half-firkin tubs, fancy, 20c; do Welsh tubs, finest, 19½@19½c; dairy tubs, firsts, 18@18½c; do thirds to seconds, 15@17½c; imitation creamery, extras, 18½c; do seconds to firsts, 14½@17c; factory, 15½c; do seconds to firsts, 14@15c; do lower grades, 12½@13½c; rolls, poor to prime, 12½@14c; old Western creamery, summer-make, 15@18c; old State dairy, tubs or firkins, 14@17½c; old Western factory, 12½@14½c.

At Elgin fancy creamery is selling at 20c per lb, and very firm.

#### CHEESE.

The market exhibits few features of interest, and it is probably useless to expect much improvement in the prospects with the near approach of the new season. Generally prices show no change from a week ago. In this market quotations still range from 10 to 10½c per lb. for best full creams, with a dull feeling in the trade. At Chicago there has been a moderate movement of the best makes, but the market as a whole is quiet and easy. Quotations on Thursday were as follows: Young Americans, 8@9½c; twins, 7½@8½c; cheddars, 7½@8½c; Swiss, 11@12½c; Limburger, 7@12c; brick, 8@10c. The New York market shows some improvement in tone as the result of a better demand. Foreign advices, however, continue unfavorable, with another drop in prices of American cheese at Liverpool. It is not thought probable that under present conditions there can be any improvement in values. Quotations in that market on Thursday were as follows: State, full cream, large, fancy, September, 8c; do choice, 7½@7½c; do fair to good, 7@7½c; do common, 6@6½c; do colored or white, small, fancy, September, 8½@8½c; do choice, 7½@8c; do common to good, 6@7c; light skims, small, choice, 6@6½c; do large, choice, 6c; part skims, small, choice, 6c; do large, 5½c; do good to prime, 4½@5c; do common to fair, 3½@4c; full skims, 2@3c.

At Liverpool on Thursday quotations on choicest American cheese, both white and colored, averaged 37s. per cwt., as compared with 38s. one week ago, a further decline of 1s. (24c) per cwt. of 112 lbs.

### DETROIT PRODUCE MARKET.

Detroit, April 7, 1898.

FLOUR.—Quotations on jobbers' lots in barrels are as follows:

Straights ..... \$4.75  
Clear ..... 4.50

Patent Michigan ..... 5.25

Low Grade ..... 3.50

Rye ..... 3.25

Buckwheat ..... 3.75

Granulated Corn Meal ..... 2.00

CORN.—The visible supply of this grain on Saturday last in the United States and Canada was 42,647,000 bu, as compared with 43,332,000 bu the previous week and 25,318,000 bu at the corresponding date in 1897. Quotations in this market are as follows: No. 2, 31½c; No. 3, 31c; No 2 yellow, 32c; No 3 yellow, 31½c; No 2 white, 32c; No 3 white, 31½c per bu.

OATS.—The visible supply of this grain in the United States and Canada on Saturday last was 12,047,000 bu, as compared with 11,636,000 bu the previous week, and 13,616,000 bu at the corresponding date in 1897. Quotations are as follows: No. 2 white, 30½c; No 3 white, 30½c per bu.

RYE.—The visible supply of this grain in the United States and Canada on Saturday last was 3,203,000 bu, as compared with 3,255,000 bu the previous week, and 3,652,000 bu at the corresponding date in 1897. No 2 selling at 52½c per bu.

FEED.—Jobbing quotations on carload lots are as follows: Bran and coarse middlings, 14c; fine middlings, 15c; cracked corn, 14c; coarse corn meal, 13c; corn and oat chow, 12c per ton.

BARLEY.—Quoted at 8@8½c per bu. But little moving.

CLOVER SEED.—Prime spot quoted at \$2.90; October delivery at \$3.25 per bu. No.

2 quoted at \$2.70@2.75. Alsike, \$3@3.50 per bu.

BUTTER.—Market stronger. Quoted as follows: Creamery, 19½@21c; prime dairy, 17@18c; fair to good, 14@16c; common, 12@13c; low grades, 8@9c per lb.

POULTRY.—Dressed turkeys, 11@12c; dressed chickens, 8½@9c; dressed ducks, 8½@9c; dressed geese, 8½@9c per lb. Live poultry 1@2c per lb less.

EGGS.—Quoted at 9c per doz for fresh.

TALLOW.—Quoted at 3½@3½c per lb.

CABBAGE.—Selling from wagons at 12@15c per doz, or \$1.30 per hundred.

DRIED FRUITS.—Evaporated apples, 8½@9c; evaporated peaches, 10@12c; dried apples, 4½@5c per lb.

APPLES.—Selling at \$3@3.50 per bbl for fair to good and \$3.75@4.00 for fancy.

MAPLE SUGAR.—Pure quoted at 10@11c per lb; mixed 8@9c per lb.

HONEY.—Quoted at 9@11c per lb for ordinary to best.

BEANS.—Market quiet and steady at 8c per bu for hand-picked.

POTATOES.—Increasing receipts weakening the market. Quoted here at 60c per bu in car lots, and 65@70c from store. At Chicago quotations are 52@60c per bu, in car lots.

ONIONS.—Market dull and lower; sales are being made at 50c per bu for Michigan.

HIDES.—Latest quotations are as follows: No. 1 green, 8c; No 2 green, 7c; No 1 cured, 9c; No 2 cured, 8c; No 1 green calf, 11c; No 2 green calf, 9½c; No 1 kip, 9c; No 2 kip, 7½c; sheepskins, as to wool, 90c@1.65c shearlings, 12@12½c.

COFFEE.—Roasted Rio, ordinary 9c, fair 11c; Santos, good 14c, choice 18c; Maracaibo, 20@25c; Java, 26@30c; Mocha, 28@32c; package coffee sold on the equality plan at a basis of \$10.00, less \$1.50 per 100-lb case in New York.

PROVISIONS.—No change since a week ago. Latest quotations are as follows: Mess pork, \$1.25 per bbl; short cut mess, \$1.75; short clear, \$1.75; compound lard, 4½c; family lard, 5½c; kettle lard, 6½c; smoked hams, 8½@9½c; bacon, 8½@9½c; shoulders, 5½c; picnic hams, 6c; extra mess beef, \$5.50; plate beef, \$9.25.

OILS.—Linseed oils and turpentine are lower; no other changes. Quotations are as follows: Raw linseed, 39c; boiled linseed, 4c per gal, less 1c for cash in ten days; extra lard oil, 48c; No 1 lard oil, 33c; water white kerosene, 8½c; fancy grade, 11½c; deodorized stove gasoline, 7½c; turpentine, 34c per gal in bbl lots.

HARDWARE.—Latest quotations are as follows: Wire nails, \$1.65; steel cut nails, \$1.60 per cwt. new card; axes, single bit, bronze, \$5; double bit, bronze, \$8.50; single bit, solid steel, \$6; double bit, solid steel, \$9.50 per doz; bar iron, \$1.40; carriage bolts, 75 per cent off list; tire bolts, 70 and 10 per cent off list; painted barbed wire, \$1.70; galvanized do, \$2 per cwt; single and double strength glass, 85 and 5 per cent off new list; sheet iron, No. 24, \$2.50 per cwt; galvanized, 75 and 10 per cent off list; No 9 annealed wire, \$1.50 rates.

DETROIT LIVE STOCK MARKET.

### Michigan Central Stock Yards.

Thursday, April 7, 1898.

#### CATTLE.

Receipts Thursday, 559, as compared with 483 one week ago. There is no change to note in quality. Market active and unchanged from prices paid one week ago.

We quote: Good butchers steers, av 1,075 to 1,175 lbs, \$4.30 to \$4.50; 850 to 1,050, \$4.00 to \$4.25; steers and heifers, \$3.80 to \$4.40; mixed butchers, \$3.25 to \$3.80; old to good fat cows, \$2.25 to \$2.65; bulls, \$3.00 to \$3.50; feeders and stockers, \$3.50 to \$4.15.

calves—Receipts, 191; one week ago, 161; active at \$4.75 to \$5.75 per 100 lbs, mostly \$5.00 to \$5.50. Milk cows and springers active at prices ranging from \$3.00 to \$4.75.

Kouff sold Black 4 fat cows av 1205 at \$3.50, 3 do av 1132 at \$3.00, and a stocker to Sullivan weighing 650 at \$3.75.

Adams sold Fitzpatrick 5 mixed butchers av 946 at \$3.35, and 2 steers av 925 at \$4.10.

Coates sold a bull weighing 1770 at \$3.25, and 4 steers av 885 at \$4.00.

Major sold Mason 19 steers and heifers av 880 at \$3.80, and 3 cows av 1100 at \$3.25.

Nott sold Fitzpatrick 8 mixed butchers av 1056 at \$3.50, and 13 steers and heifers av 907 at \$4.20.

Clark & B sold McIntyre 4 mixed butchers av 860 at \$3.80, and a fat cow to Black weighing 1660 at \$3.50, and a bull to Mason weighing 700 at \$3.50.

Bergen & Terhune sold Mich Beef Co 2 cows av 1105 at \$3.50, and 2 steers av 815 at \$1.00.

Ed Clark sold Caplis 2 steers av 820 at \$4.00, and 2 cows av 1095 at \$3.50.

Judson sold Bussell 2 steers av 800 at \$4.00.  
Roberts & S sold Fitzpatrick 4 cows av 1177 at \$3.25; 2 do av 930 at \$3.00; a steer weighing 590 at \$4.00, and a heifer weighing 760 at \$3.50.

Hauser sold Sullivan a bull weighing 1350 at \$4.05, and 6 steers and heifers to Black av 1058 at \$4.35.

Roe & Holmes sold Mason 12 stockers av 478 at \$4.00.

Cushman sold Mich Beef Co 2 steers av 1080 at \$4.25, and 5 do av 1304 at \$4.50.

Forbes sold Regan 3 mixed butchers' heifers at \$3.35; 3 steers and heifers to Bussell av 793 at \$3.90, and a cow weighing 1070 at \$3.50.

## SHEEP AND LAMBS.

Receipts Friday, 570; one week ago, 580. Quality not very good. Market active and about steady with above quotations, closing firm.

Packard sold Mich Beef Co 22, most lambs, av 111 at \$5.25.

Sutton sold same 19 lambs av 62 at \$5.25. McMullen sold Sutton 45 lambs av 86 at \$5.65.

Roe & Holmes sold H Robinson 13 lambs av 71 at \$5.50.

Roberts & S sold Oversmith 75 lambs av 103 at \$5.55.

Leach sold McIntyre 17 clipped av 76 at \$4.35 and 34 do to Hammond, S & Co av 69 at \$4.00.

Horner sold Johnson 96 lambs av 83 at \$5.65.

Judson sold Sutton 60 mixed av 94 at \$4.75 and 28 lambs av 72 at \$5.65.

## HOGS.

Receipts Friday, 4,635, as compared with 4,852 one week ago. Market opened slow and lower; later trade was active at prices 10c below above quotations, closing weak. Several loads were shipped through in first hands; bulk sold at \$3.75.

Morrison sold Parker, Webb & Co 80 av 159 at \$3.70.

Downey sold same 67 av 186 at \$3.75.

Bartholomew sold same 50 av 160 at \$3.75.

Joyce & Sons sold same 77 av 159 at \$3.75.

Thursday the market was strong and the tendency upwards, with prospects good.

Sheep and Lambs.—Receipts Monday were 18,200, as compared with 21,200 the previous Monday; shipments were 14,400 as compared with 16,800 for the same day the previous week. The market on Monday was fairly active and strong for sheep, with a light supply, while lambs were in large supply and lower. The latter declined 10@15c on handy weights, and 25@30c on heavy sorts. A few fancy wool lambs of the handy weights sold at \$6.05, but \$6.00 was generally the ruling price for tops, with fair to good wools at \$5.65@5.80; good to strictly choice clips sold at \$4.50@4.75 for the bulk of the fresh clips, fall clips, with a fair growth of wool, selling at \$4.80@4.85, a fancy deck, with a good growth of wool bringing \$5.25, and a load of winter clips \$5.40. Culls to fair butchers' clips \$4.00@4.45; culls to fair wool lambs, \$4.50@5.50. Heavy clipped lambs ruled draggy all day, with exporters bidding only \$4.40@4.60 for the kind that brought \$4.65@4.85 last week. Best wool wether sheep sold at \$4.90@5.00; fair to choice handy mixed, \$4.65@4.90; good to prime clipped sheep, \$3.65@4.25; wool yearlings, good to choice, \$5.00@5.25; clipped yearlings, \$4.25@4.40. Since Monday receipts have been fair and values on all sorts have held steady. Heavy lots of both sheep and lambs ruled stronger on an improved demand from exporters. Quotations at the close on Wednesday were as follows: Native wool lambs—Choice to fancy native lambs, 75 to 85 lbs, \$5.90@6.00; fair to good native lambs, \$5.50@5.80; heavy lambs averaging from 110 down to 95 lbs, \$5.60@5.75; good cull and common lambs, \$5.00@5.40; common to fair cull lambs, \$4.65@4.90; fair to choice feeding lambs, \$5.40@5.75; good to prime western lambs, \$5.50@5.90. Clipped lambs—Common to good, \$4.25@4.50; choice to extra fresh clipped, \$4.65@4.85; early fall clipped lambs, \$5.00@5.20; heavy clipped lambs, \$4.50@4.60. Wool yearlings—Good to choice native handy yearling wethers, \$5.00@5.25; common to fairly good ewes and mixed yearlings, \$4.75@4.90; heavy yearlings, \$4.50@4.75. Native wool sheep—Prime to fancy wethers, \$4.90@5.00; good to fancy hand sheep, \$4.75@4.90; common to fair, \$4.40@4.65; culls and common, \$3.75@4.35; heavy export fed western sheep and wethers, \$4.50@4.75; heavy native wethers, 110 to 150 lbs, \$4.75@5.00. Clipped sheep—Choice to extra handy, \$4.00@4.25; culls to good, \$3.00@3.25; heavy clipped sheep, \$3.75@4.25.

Thursday the market ruled steady and firm.

Hogs.—Receipts of hogs on Monday last were 26,600, as compared with 34,390 for the same day the previous week, and shipments were 18,810, as compared with 21,850 for the same day the previous week. The market opened slow on Monday, but became more active later, and closed strong. All offered were sold. Workers opened at \$4.10 but advanced to \$4.12@12c; medium and mixed weight lots sold up to \$4.15, with a few heavy mediums at \$4.17@12c; good to prime heavy were firm at 4.15; and pigs, ranging from 75 to 120 lbs., ranged at \$3.90 per cwt. The market closed steady. Since Monday the market has changed so that medium and heavy grades have become dull, while workers have improved. Quotations at the close on Wednesday were as follows: Good to choice light medium grades 165 to 190 lbs, \$4.17@4.20; choice and selected workers, 140 to 160 lbs, \$4.20@4.25; light workers and pigs mixed, \$4.20@4.22c; mixed packing grades, 180 to 200 lbs, \$4.17@4.20; fair to best medium weight 210 to 230 lbs, \$4.17@4.20; good to prime heavy hogs of 270 to 300 lbs, \$4.15@4.20; roughs, common to good, \$3.50@3.75; stags, common to good, \$2.75@3.15; pigs, 110 to 120 lbs, good to prime corn fed lots, \$3.90@4.00; pigs, thin to fair, light weights, 75 to 100 lbs, \$3.70@3.80; pigs, skips and common, light and undesirable lots, \$3.25@3.60.

Thursday the market opened lower but firmed up: Workers, early, \$4.05@4.12c; later, \$4.15@4.20; mixed, \$4.15@4.17@12c; heavy, \$4.20; pigs, \$3.65@3.95.

Roe & Holmes sold Mich Beef Co 6 steers and heifers av 880 at \$3.85 and 6 cows av 1025 at \$3.35.

Brewer & S sold Sullivan 20 steers and heifers at 706 at \$3.75.

Haley sold Mich Beef Co 12 steers av 1196 at \$4.45.

Eddy sold Caplis & Co 31 steers and heifers av 960 at \$4.15.

## OUR BUFFALO LETTER.

East Buffalo, April 7, 1898.

Cattle.—Receipts of cattle on Monday last were 5,230, as compared with 6,688 the same day the previous week, and shipments were 4,268, as compared with 4,114 for the same day the previous week. The market opened with a fair demand for good fat desirable steers, and fat butchers' cattle of all kinds. Handy fat light steers and good butchers' cattle were firm, and in some cases a shade stronger than the previous Monday, while good export steers were about steady. Oxen were in light supply, but generally lower except for choice light smooth ones, and the same could be said of bulls, some of which sold 10@15c lower. The best full loads of cattle reported brought \$5.30, averaging 1,513 lbs.; two choice heavy steers of 1,785 lbs., brought \$5.35; good, smooth 1,399-lb. steers sold at \$5.15, and 1,349-lb. good quality steers \$5.10; fair to good 1,240-lb. steers \$4.30, and 1,323-lb. at \$4.70. Heavy stockers and good weight feeders were 10@15c lower. The best light stockers and yearlings sold at \$4.35@4.40, with others at \$4.15@4.25. Feeders sold at \$4.15@4.20, up to \$4.25 for choice. The market closed a little weak. Since Monday the market has showed steadiness, with values practically unchanged. The outlook on Wednesday was regarded as favorable. Quotations on that day closed as follows: Export and shipping steers—Prime to extra choice finished steers, 1,400 to 1,450 lbs., \$5.15@5.30; prime to choice steers, 1,300 to 1,400 lbs., \$4.90@5.10; good to

choice fat steers, 1,200 to 1,300 lbs., \$4.65@4.80; good to choice fat smooth steers, 1,100 to 1,200 lbs., \$4.40@4.60; green coarse and rough fat steers, 1,050 to 1,400 lbs., \$3.85@4.35. Butchers' native cattle—Fat smooth dry fed steers, 1,050 to 1,150 lbs., \$4.45@4.65; fat smooth dry fed light steers, 900 to 1,000 lbs., \$4.35@4.40; light half fat steers, \$4.20@4.30; choice smooth dry fed steers, thin to half fattened, 1,000 to 1,300 lbs., \$3.65@4.25; fair to good steers, 900 to 1,000 lbs., \$4.00@4.30; choice smooth fat heifers, \$4.35@4.50; fair to good fat heifers, \$3.75@4.25; light thin half fat heifers, \$3.40@4.35; fair to good mixed butchers' stock, \$3.85@4.20; mixed lots, fair to choice quality fat cows and heifers, \$3.65@4.25; good smooth well fattened butcher cows, \$3.90@4.00; fair to good butcher cows, \$3.00@3.30; common old heavily cows, \$2.00@2.75. Native stockers, feeders, bulls and oxen—Feeding steers, good style weight and extra quality, \$4.15@4.25; feeding steers, common to only fair quality, \$3.90@4.00; good quality yearling stock steers and calves, \$4.15@4.35; stock steers, cull grades and throw outs, \$3.65@3.90; export weight bulls, fat and smooth, \$3.90@4.25; good fat smooth butchers' bulls, \$3.60@3.75; fair to good sausage bulls, \$3.25@3.50; thin old and common bulls, \$2.00@3.25; stock bulls, common to extra, \$2.65@3.50; fat smooth young oxen to good lots fit for export, \$4.25@4.50; fair to fairly good lots fit for export, \$4.25@4.50; fairly fattened young oxen, \$3.50@4.15; old common and poor oxen, \$2.25@3.40.

Receipts Thursday estimated at 8,500. Market strong to 10c higher; beesves, \$3.90@4.40; cows and heifers, \$2.25@4.65; steers, \$3.60@4.05; stockers and feeders, \$3.75@4.05.

Sheep and Lambs.—Receipts last week were 69,445, as compared with 76,719 for the previous week, and 68,145 for the corresponding week in 1897. The market opened with 21,000 on sale, as compared with 16,901 the same day last week. The increase was altogether in lambs, the supply of which was so large as to cause a decline of 10@15c per hundred lbs. while sheep held steady. Clipped sheep sold at \$4.40@4.55; in fleece, \$4.60@4.90; clipped yearlings, \$4.90@5.10; clipped lambs, \$4.75@5.5; natives in fleece, \$5.40@5.75; Colorado's in fleece, \$5.85@5.90, showing a decline of 15c, as recent sales were made as high as \$6. Up to and including Wednesday of this week receipts have been 55,608, as compared with 45,839 for the same days last week. Trade Wednesday ruled active, with prices steady to strong on sheep, but easier on lambs. The bulk of the stock now arriving is clipped, and they are preferred. Common clipped lots, including ewes, \$4@4.50; in fleece, mostly wethers, \$4.60@4.90; yearlings sold at \$4.80@5.15; common clipped lambs, \$4.40@4.60; common in fleece, \$5@5.25; fair to good, \$5.50@5.60; prime Colorado's, \$5.80. About 2,000 feeding lambs sold at \$5.35.

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Hogs.—Receipts last week were 143,656, as compared with 142,362 for the corresponding week, and 128,698 for the corresponding date in 1897. Offerings on Monday were 23,000 as compared with 36,661 the same day last week a decrease of 13,000 head. The light supply caused a rush on the part of buyers to secure what they wanted, and this resulted in an advance of 5@10c, with the latest sales the strongest. Everything offered was sold. Roughs sold at \$3.65@3.85; prime mediums, butcher weights, and shippers, \$4@4.10; light mixed, say 120 up to 200 lbs, to round up at an average of 160 to 180 lbs, \$3.90@3.95, an occasional lot, \$4; a strictly assorted light of 160@170 lbs, \$3.95@4; light little pigs of 100 lbs average and under, \$3.65@3.75. Up to and including Wednesday of this week receipts have been 77,061, as compared with 79,838 for the same days last week. The market on Wednesday was fairly active, but at a slight decline from Tuesday's figures. Quotations ranged as follows: Rough and common sorts, \$3.60@3.75; prime packers and good mixed, \$3.90@3.95@4.10; prime mediums, butcher weights and shippers, \$4@4.05; three lots were bought by packers at \$4.10. A prime light sort, carefully selected, to average 160@170 lbs, would cost \$3.90@3.95; light mixed, 120 up to 200 lbs, to round up at 160 lbs average, \$3.85. Pigs, 100 lbs average and under, \$3.75@3.85.

Thursday receipts estimated at 28,000; market fairly active, averaging a shade lower; light, \$3.70@3.92c; mixed, \$3.75@4; heavy, \$3.70@4.05; rough, \$3.70@3.80. Thursday the market ruled steady and firm.

Hogs.—Receipts of hogs on Monday last were 26,600, as compared with 34,390 for the same day the previous week, and shipments were 18,810, as compared with 21,850 for the same day the previous week. The market opened slow on Monday, but became more active later, and closed strong. All offered were sold. Workers opened at \$4.10 but advanced to \$4.12@12c; medium and mixed weight lots sold up to \$4.15, with a few heavy mediums at \$4.17@12c; good to prime heavy were firm at 4.15; and pigs, ranging from 75 to 120 lbs., ranged at \$3.90 per cwt. The market closed steady. Since Monday the market has changed so that medium and heavy grades have become dull, while workers have improved. Quotations at the close on Wednesday were as follows: Good to choice light medium grades 165 to 190 lbs, \$4.17@4.20; choice and selected workers, 140 to 160 lbs, \$4.20@4.25; light workers and pigs mixed, \$4.20@4.22c; mixed packing grades, 180 to 200 lbs, \$4.17@4.20; fair to best medium weight 210 to 230 lbs, \$4.17@4.20; good to prime heavy hogs of 270 to 300 lbs, \$4.15@4.20; roughs, common to good, \$3.50@3.75; stags, common to good, \$2.75@3.15; pigs, 110 to 120 lbs, good to prime corn fed lots, \$3.90@4.00; pigs, thin to fair, light weights, 75 to 100 lbs, \$3.70@3.80; pigs, skips and common, light and undesirable lots, \$3.25@3.60.

Thursday the market opened lower but firmed up: Workers, early, \$4.05@4.12c; later, \$4.15@4.20; mixed, \$4.15@4.17@12c; heavy, \$4.20; pigs, \$3.65@3.95.

Roe & Holmes sold Mich Beef Co 6 steers and heifers av 880 at \$3.85 and 6 cows av 1025 at \$3.35.

Brewer & S sold Sullivan 20 steers and heifers at 706 at \$3.75.

Haley sold Mich Beef Co 12 steers av 1196 at \$4.45.

Eddy sold Caplis & Co 31 steers and heifers av 960 at \$4.15.

big, coarse, branded westerns that sold equally as strong as any day this week. All sorts of butchers' stock and canners selling as quick and as strong as any time. The stocker trade remains quiet; prices too high for either the speculator or the country buyer. The best prices so far this week for fat native cattle range between \$5@5.35. Fair to good branded and horned western corn-fed steers sold at \$4.70@4.90, and light little natives have sold well all the week. All kinds of butchers' stock, except stags, continues to sell strong. Heifers sold up to \$4.75 and cows at \$2.50@2.25 for common to best. Government contracts are helping common cattle.

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## Horticultural.

For the Michigan Farmer.  
THE GARDEN.

With the first days of spring preparations may be made for the garden. Of course this is apt to be a busy time, yet a few hours may be taken now to much better advantage than a little later.

All the brush, weeds, leaves and such rubbish as will burn is gathered into the garden for a bonfire at the first opportunity. The ashes are then where we need them. We have never yet seen a garden that had any more of this fertilizer than could be utilized. If this can be done before time for plowing, so much the better; if not, we pile the trash on the space left for the later vegetables, as we prefer to have the plowing done as early as the weather will permit. But at any rate we can gather up what is already in the garden, old vines and stalks, and by burning these get rid of a multitude of insects which have not yet been thawed into activity. If there is a supply of corn cobs they make a valuable addition to the ash pile.

If manure is needed we use the finest we can get. The more thoroughly rotted the better it is, but we do not borrow any trouble if it is not in the best of condition. We are frequently advised to draw out the manure for the garden and compost it. This all sounds well, but we have yet to find a farmer who puts it into practice and don't expect to find one very soon. Where land is limited to a few acres and it is desirable to get the greatest possible return from it, high fertilization is a necessity, and it is also important to have the plant food in a form that can be readily taken up. But where land is cheaper than labor the conditions are different. If one row of radishes is not sufficient it is easier to sow two than to double the product of the one by enriching the soil. Two rows are not as easy to keep clear of weeds as one, but that matter can be attended to when the time comes. With a horse and cultivator the weeds can be taken care of quite well, anyhow. Our vegetables will not be as early nor as large as the market gardener's, but such matters are of much less importance to us than to him.

But there are some things which we do not like in the garden. If the ground is mellow with considerable sand we do not like much straw, unless well rotted. If it is not, it is likely to draw more than its share of the moisture at the expense of the plants. Garden truck grows rapidly and needs a large supply of water. But we can stand most anything in the garden except cobs. If there is anything that will make a man feel that a garden is not much short of a failure it is a covering of cobs plowed under. Some of them will stick up a little above the surface this year, and others will the next time the ground is plowed. They get in the way of the marker and make the rows zig-zag. They are in the way of the hoe and the cultivator and when plants are set out. They absorb moisture that should go to the plants, and if there are many of them the result is often anything but agreeable. Cobs make a convenient refuge for certain little white grubs. We are not certain that these insects are of a kind, which is injurious, but we would much rather have them out of the garden than in it, and one way for keeping them out is to avoid plowing under cobs. All things considered, we have little use for any great amount of straw in the garden, and no use for any cobs at all, except when in the form of ashes.

We like to have the ground plowed as early as convenient, though we have never found it any advantage to rush the season in planting the seeds. It is nice to have early vegetables, but we see no advantage in taking the chances with the frosts. Seeds planted extremely early will come up and if the weather keeps warm all will be well. But it does not take much to stunt such plants, as we have had occasion to notice several times. One year we had tomato plants caught by a cold snap. They were not killed. Many did not appear greatly injured, but they never recovered from the setback. Another year we planted sweet corn rather early, hoping to surprise the neighbors with roasting ears before the usual time. The neighbors were not surprised, but we were. There was no cold weather that spring, but a rather chilly wind came along when the corn was about four inches

high. The tender blades received a check. The crop was little if any earlier than that planted at the usual time, and did not amount to very much. We have found it best to be conservative. No one desires to be very late with the garden, yet the advantages coming from being very early are not with us sufficient to warrant our taking the chances with the weather. Much, however, depends upon location and soil. Some gardens are several days earlier than others near by, merely on account of their more favorable situation, not to mention the advantage of a warm soil.

We have never tried spading the garden, and do not find the practice much in favor now. It is altogether too slow and laborious a process, but the ground can be put in excellent shape by this means, and for that reason there are some who still prefer it. But the plow agrees better with the broad and liberal views of the average Michigan farmer. If he had to depend upon the spade it is quite probable that the garden would be neglected. As it is, he expects to have a large garden and one well filled.

F. D. W.

### PASTURE FOR HOGS IN AN ORCHARD.

To the Editor of The Michigan Farmer.

I would like to hear through The Farmer if rye sown this spring in an orchard for hog pasture would be a good thing; and how much to the acre? Or is there anything better?

Genesee Co.

H. C. V.

Rye makes a good pasture for hogs, and also an excellent green crop to plow under. But we think the common field pea will be found more valuable. The pea, like other legumes, draws nitrogen from the air and stores it in its roots. It takes less from the soil than rye, and leaves it in better condition. For pasture we would advise sowing two bushels to the acre one way and a bushel of oats the other way of the field, using a drill. The hogs can be turned in as soon as the pods form, and they will clean the ground well. The pea makes an excellent cover crop, as its broad leaves protect the soil and keep it from drying out, while it mellows and enriches the soil. On stiff clay it is especially valuable. Rye takes the nutrient it requires from the soil, and very little from the air; neither does it leave the ground in such good shape as the pea. As a feed for hogs the pea is one of the best known, especially to grow them. In an orchard sown to peas and oats, and with the fallen fruit, hogs should grow quickly and make a high quality of pork.

For The Michigan Farmer.  
THE THREE P'S.

First one, sweet peas. Though gardens are not considered respectable without them, it is not generally considered that they are notional, and will bear ten times as many flowers if their whims are cared for. They like a wire netting for support much better than strings, and look much neater clinging to this. Again, the wire ought to be stretched north and south, instead of east and west; the sun strikes them better thus situated. Pick them every day. If you don't, they pay you by flunking before the season is half over.

Petunias come next, and happy is the woman who can have a large bed of them. The new seeds are grand, in most bewildering variety and exquisitely shaded. Better pay 25 cents for a packet of choice seeds than get five packets of cheaper ones. One thing queer about petunias: The scent is not pleasant when the sun shines upon them, but very sweet after sunset.

My third P is the little darling, phlox drummondii. The place for it is near the kitchen door, where the exquisite markings and colors can be enjoyed while washing dishes or making bread.

ANNA LYMAN.

### RASPBERRIES AND BLACKBERRIES.

Purdue University Experiment Station has issued a bulletin giving the results of its experience with a number of the newer varieties of raspberries and blackberries. Regarding the former it says that twenty-eight varieties of raspberries and sixteen varieties of blackberries were tested. A few of the older varieties are retained for comparison, but the majority are of comparatively recent introduction. Some of the more desirable varieties

are given here: Miller is a remarkable bearer of medium sized fruit. J. H. Hale, of Connecticut, pronounces it the best of all the early reds for general culture. Loudon is a good mid-season, market berry. It will carry well. Columbian and Shaffer are made up on the same plan, both bear large purple fruit and both propagate from tips. If you have one you do not need the other.

Among the newer black caps the bulletin says nothing will surpass the Conrath for size and earliness, and Kansas for a mid-season berry. A new variety from New York, called Black Diamond, was fruited for the first time last season, and in point of size and productiveness it equals the Kansas. Among the yellow or cream colored varieties, Golden Queen is much superior to any other variety tested. In addition to the above, for general planting, the following varieties are recommended: Eureka, Hillborn, Johnston's Sweet, Nemaha and Progress.

In blackberries the Snyder is given first place as doing well over a large extent of territory. The others recommended for general cultivation are Agawam, Ancient Briton, Early Harvest (with protection), Eldorado, Erie and Taylor.

### RED RASPBERRIES.

BY CHARLES C. NASH.

(Continued from issue of March 26.)

#### DISEASES.

The red raspberry with me has never been diseased. The secret of keeping all kinds of disease out of a berry patch is first to get good, healthy plants, then keep them so by thorough and strictly clean cultivation.

A good coat of wood ashes worked into the soil the first season after plants are set is a good preventive of disease and keeps bushes in a good, healthy condition, providing cultivation as above is given from the time the ground is in good condition in the spring until the latter part of July.

#### MULCHING.

A neighbor scatters five to six inches of straw alongside of his red raspberry rows and plows furrows from the space between the rows on the straw. His method gives a good crop of berries for one year, as it holds the moisture nicely, but this plan cannot be followed every season with success.

Where a number of acres are set to red raspberries the "dust mulch" is the only economical as well as practical one, but for smaller plantations more berries can be raised on the same ground by mulching with old straw or marsh hay spread about six inches thick, or thick enough to keep the weeds down. In a village garden all old rubbish can be thrown among the raspberry bushes to good advantage, thus, the raking of the lawn, old leaves etc., can be made useful as well as being hidden from sight among the berry plants.

Before applying a straw mulch I prefer to scatter two or three forkfuls of rotten barnyard manure over the surface of the ground around each hill. This makes a great difference in the size and productiveness of the berries as well as new growth of cane, especially on light, sandy soil.

A very good way where one wishes to cultivate the center of the space between rows is to scatter straw mulch between the hills and about two feet wide each side of the row. This will save hoeing, and the space of two feet or more wide can be quickly run over with cultivator. A load of mulch applied in this manner will go over quite a patch of berries, but even this would not be practical on a large scale. It would pay much better to place three or four forkfuls of barnyard manure around each hill, or, rather, at the side of each hill and allow the spring rains to wash the fertilizing elements into the soil, and when cultivation commenced the coarse part of the manure left on top would help to make all the nice "dust mulch" as the cultivator went back and forth in the rows each week, as described under cultivation.

If on a small patch of berries the mulch is very thick it should be forked up and turned over two or three times during the season, the first time as soon as warm weather comes on in the spring, that the soil may keep from souring.

#### MARKETING.

The home market I have found the most desirable. I generally use two baskets made of slats neatly planed before nailing together, which will hold four or six pint or quart boxes

each. The boxes need not be expensive ones, but they should be neat and clean. I think pint boxes for handling red raspberries are much superior to quarts, as the berries will empty out in better shape, especially if the grower has to drive from five to ten miles to market.

If one desires to work up a good home trade, by that I mean house to house trade, the first principle that should govern his plans should be neat and clean boxes, baskets, crates, man, horse and wagon. The slouchy-appearing man loses the best trade and the neat one as above gains it. The wagon should be so arranged that every crate can be kept out of the dust all the time.

Another point is to get berries on the market as early as possible in the morning, as they have cooled on the bushes during the night and will keep as long again as though they were picked in the heat of the day, and present the best appearance. Not only this, but you are on hand before the other berry wagons have driven all over your route and tried to undersell you.

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#### For the BERRY GROWER.

We supply the best plants of the best varieties. It's our specialty, we do only that. Strawberries, Raspberries, Blackberries, Currants, gooseberries, etc. Write for prices and circulars free.

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## THE SAN JOSE SCALE.

In a recent report sent out by the Department of Agriculture it is stated that the action of Germany in attempting to exclude American fruit and nursery stock from her markets has called very general attention to this pest in the United States. The entomologist of the department, Dr. L. O. Howard, has prepared an exhaustive bulletin on the history, effect and treatment of the scale, in which he says:

"In the entire history of economic entomology in this country no other insect has excited so much interest as has the San Jose scale. The attacks of the scale are insidious and in many instances it has acquired a firm footing in a locality before its proximity was suspected. However, it cannot be said that its advent in the East has been an unmixed evil. It has aroused the whole fruit-growing population of the country to a sense of the value of intelligent entomological investigation, has brought about legislation against injurious insects in a number of states, and has almost alone been responsible for the appeal from horticulturists and nurserymen all over the country for national legislation." The bulletin gives a symposium of the conditions and distribution of the pest in some thirty states and territories, showing its wide spread. In some sections climatic conditions seem to kill it and in others it is destroyed by fungous diseases. Work is now being done in investigating different fungi which will reduce its ravages.

Dr. Howard gives a list of 55 fruit and shade trees and ornamental shrubs preyed upon by the scale. He devotes considerable space to experiments and other treatment of the pest.

At the same time that eastern growers are becoming seriously worried over this insect, the San Francisco Chronicle prints a letter from a correspondent at San Jose, who says, in commenting upon the great alarm in the East at the ravages of the scale, that he does not believe the trouble will be permanent any more than it was in California. One may mingle, he states, among the fruit farmers near San Jose for a year and never hear the pest mentioned. The lime, sulphur and salt remedy has been considered a sovereign remedy. There is to-day, at San Jose, practically no interest in the San Jose scale. He concludes: "We state this as a word of encouragement to eastern fruit growers who are now alarmed, as we were around San Jose about ten years ago." The formula for the San Jose spray which is used in California is as follows: Unslacked lime, 40 lbs; sulphur, 20 lbs; salt, 15 lbs. Ten pounds of the lime is first slacked and boiled with the sulphur in 20 gallons of water for three hours. The remaining lime and the salt is then added and the whole boiled another hour. Enough water is then added to make 60 gallons solution, which is strained before using. This is sprayed on the trees during the winter when the trees are dormant. It is also an excellent anti-fungal spray.

## The Poultry Yard.

For the Michigan Farmer.

## TIMELY TOPICS DISCUSSED.

How many farmers in this State have their henhouses in good condition and ready to commence hatching young chicks? This question is asked perhaps as many times as any one question about farm stock. Very few farmers realize the importance of keeping their fowl house clean. This is of more importance than keeping the horse stable clean, as the filth in the henhouse breeds vermin and sickness, and failure in the business.

A few weeks ago I was talking with a lady who had a new fowl house built last summer, and I said I would like to inspect it. She made the remark: "Don't come until we get it cleaned out, as we have not cleaned it since we built it." This is all wrong, and we do not see how any one can get any eggs, or even get the birds to thrive while they live in such a house. A brand new house, and it has not been cleaned out since it was built, some eight months ago! How would we feel to be shut up in the henhouse for one night, and breathe the air that the fowls have to? It is enough for me to be shut in such a house for a few moments. And yet the majority of farmers let their fowls live in this kind of a house year after year, and then they wonder why their birds do not do well and don't pay their way.

Only a short time ago a lady asked me how she could arrange her fowl house so it would be handy to keep clean without so much work. This lady is one of the exceptions, as she sees that her fowl house is kept clean. But it is a large house, and the birds roost in the basement, and it is hard work to keep it clean. I told her to arrange the perches around the outside of the house, and put a platform about twenty inches from the ground, and then put the perches about eight inches above this platform, and then she could clean it out every morning and it would not be half as much work. This platform should be about two feet and a half wide, and if two roosts were needed it should be three feet wide.

Then another thing was not as this lady would like to have it. Her fowls roosted upon the perch which run across the entire basement and was about five feet high, and when she wanted to catch any fowl for the market it was quite a hard job when upon such roosts. I think the best roosts are those which are on a level and not over two feet from the floor of the house. Those having drop boards under them are the best to keep clean, and give the best satisfaction. In most farmers' henhouses you will find the roosts in the shape of stairs, and the birds all want to get upon the top round. The weak ones are knocked down by the strong ones, and sometimes are hurt so they are of no use afterward. This can all be avoided by having the roosts on a level, and they can be kept clean much better than in any other way.

In The Farmer of March 26th a lady reader asks the best way to fence in about two acres of ground where she can keep turkeys during the laying and hatching season. The best fence for turkeys is a six-foot wire fence. Get the two-inch mesh and six feet wide; set the posts about one rod apart and stretch the wire tight. Do not put any board or slat at the top of the posts, as if you do the turkeys will fly upon this; but if there is nothing at the top they will not fly over the wire, and can be kept in this kind of a yard all the time. The wire can be bought very cheap when one uses as much as this lady wants, and is the best and only fence that will keep turkeys enclosed.

C. L. HOGUE.

Calhoun County, Mich.

## TWO-STORY HENHOUSES.

Noticing the inquiry about two-story henhouses I will say I built one 40 feet long by 18 feet wide, and two stories high. Don't like it. Wish I had made it one story high and 80 feet long. I don't like to scrape the board floor above. Better have the floor on the ground and keep gravel all over it. Clover or wheat chaff is nice to keep under the roosts to catch the droppings; makes it easy to clean out, and the manure is better when applied to your land, as hen manure should be spread very thin to get best results.

W. R. HOWE.

Clinton County, Mich.

## POULTRY NOTES.

C. E. Brown, of St. Clair County, sends the following method for getting rid of lice in the henhouse: Spray with boiling water. If you do not have a spray pump put the water on with a dipper. When you get this thoroughly done, sprinkle with a little slacked lime to sweeten.

A poultry raiser near San Jose, California, writes the result of a little investigation into the cause of Minorca eggs hatching so poorly. A hen always lays its eggs while in a standing position, and a heavy egg like a Minorca will fall from the fowl with a thump on a bare nest-board, often sufficient to crack the shell. This crack in the shell closes up tightly and is only visible on close inspection, or found by passing a soiled finger over the shell, when the crack will appear as a dark line. Now such eggs very rarely hatch and no doubt many of them are set. This observer, after making this discovery, provided a deep, soft bed of straw to receive the egg when it was ejected. Twelve of the eggs laid in the new nest, sound in shell, but from precisely the same birds whose eggs previously hatched so poorly, were set; result, ten vigorous chicks.—Market Basket.

Elmer Stark, of Oakland county, in a letter to the Michigan Poultry Breeder, and published in that journal, says: "There are two papers published in Michigan that should be placed side by side in every farmer's home in the State, viz., The Michigan Farmer and

the Michigan Poultry Breeder. What wealth of knowledge in the two, not to mention the pleasant, long winter evenings one may pass away studying them. But alas, how many farmers right here in Michigan who cannot see it that way. I often wonder whether it is their ignorance, indifference, or have they sunk to such a low level that they cannot get out of the rut."

The American Fancier in a recent issue says: "Speaking of the Cayuga duck reminds us of the fact that it is the table duck par excellence. While not as large as the Pekin or Rouen, the Cayuga is very meaty and of excellent flavor." The above paragraph taken from America's only exclusive poultry weekly, reminds us of a little experience with a trio of ducks purchased for Cayugas some ten or eleven years ago. They were entered at the State Fair as Cayugas, had been awarded a position under that name, and had been purchased while on exhibition by a friend of the writer and sent to us. The real truth of the matter was, they were not Cayugas, and

we very much doubt if there was the slightest fraction of Cayuga blood in their veins. To have been pure-bred Cayugas it would have been necessary for them to have been jet black, or perhaps more strictly, of "a greenish sheen;" but in reality they were a colored duck very much after the order of the Rouen; in fact, we believe this is really what they were, but the owner, either ignorantly or intentionally, entered them wrongly, and not only that, but they had been accepted and judged under this name, and lastly received first prize. While this comes from the records of a State Fair it is but a sample of the so-called judging that is carried on in the poultry department at many of the country fairs where "committee judging" is the order of the day.

The Cayuga is not a popular duck and we doubt very much if it ever will be. There are too many others that are just as good and better. Still the deep lustrous greenish-black plumage cannot but appeal to any beauty loving eye.

## OVERWORKED WOMEN.

## Letters to Mrs. Pinkham From Women Who Have Been Helped From Sickness or Health.

The ordinary every-day life of most of our women is a ceaseless treadmill of work. How much harder the daily tasks become when some derangement of the female organs makes every movement painful and keeps the nervous system unstrung!

The following letter from Mrs. WALTER S. BANTA, Sparkill, N. Y., tells the story of many women, and shows them how to get relief:

"DEAR MRS. PINKHAM:—I cannot thank you enough for all Lydia E. Pinkham's Vegetable Compound has done for me. When I wrote to you I had suffered for years with falling, inflammation and ulceration of the womb; my back ached, and I was so much distressed I could scarcely walk. I was a burden to myself and did not care whether I lived or died.

"I have taken five bottles of your medicine and it has done wonders for me as all my friends can testify. I can now do my own work, and do not know how to express my gratitude to you for the good your medicine and advice have done me. I owe my life to Mrs. Pinkham."

Mrs. Pinkham's counsel is offered free to all women who need advice about their health. Her address is Lynn, Mass. Mrs. P. H. HUTCHCROFT, Kellerton, Iowa, tells here in her own words how Mrs. Pinkham helped her:

"DEAR MRS. PINKHAM:—I was in a very bad condition before I wrote to you and began the use of Lydia E. Pinkham's Vegetable Compound. I did not know what to do. I suffered terribly every month, when on my feet would have such a bearing-down feeling, was very weak, womb was swollen, back ached, appetite was very poor, also had trouble with my head. I have taken several bottles of your Compound and cannot say enough in its favor. It helped more than all the doctors."

Lydia E. Pinkham's Vegetable Compound; a Woman's Remedy for Woman's Ills

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## Farmers' Clubs.

CONDUCTED BY A. C. BIRD.

All correspondence for this Department should be addressed to A. C. Bird, Highland, Mich.

## OFFICERS OF THE STATE ASSOCIATION OF FARMERS' CLUBS.

President—E. J. Cook, Owosso.  
Vice-President—Mrs. E. L. Lockwood, Petersburg.

Secretary-Treasurer—C. M. Pierce, Elva.  
Directors—W. H. Howlett, Dansville; C. J. Phelps, Damon; F. M. Whelan, Vernon; A. L. Landis, Springport; H. Gaunt, Highland; A. P. Greene, Eaton Rapids.

All communications relating to the organization of new clubs should be addressed to C. M. Pierce, Elva, Mich.

Association topic for May: "Dairy and Food Laws and the Farmers' Relation Thereto."

## THE FARMER AND HIS OPPORTUNITIES.

Extracts from a Paper by L. L. Bromley, of the Marion Farmers' Club.

The progressive farmer sees with prophetic vision the power that is his to come in directing the affairs of the nation, and exerts himself to the utmost to uplift and educate those about him who complain of oppressive laws without the knowledge of the way to rectify them. Why is it that a people holding the balance of power permit discriminative legislation, have no active connection with the government and without formal protest submit to the dictation of those who naturally have no interest in their affairs? I do not wonder when I see the listlessness of the farmer in matters political that he is not better represented in the halls of Congress and in his state government. You complain that you are discriminated against in making the laws, that the men who hold office in the institutions devoted to your interests are not practical farmers. If this be so, whose fault is it? Surely not the men of whom you complain. All men are or should be ambitious. Can you censure a man whose interests and the interests of his constituents are directly opposed for accepting the honor of representing them if he receives the number of votes necessary to entitle him to that honor? The fault is yours, not his. If you sit idly by and permit the election of men dangerous to your cause, congratulate rather than condemn them, for they will have had more of the material of which successful men are made than yourself. If you wish to be represented by a man pledged to your interests attend your caucuses, select him from among yourselves and give him your vote. Break away from the old tradition of a straight ticket. The man who sacredly pledges himself to carry out your wishes so far as they pertain to legislative action, even if he be not of the party of your choice, is the man who should receive your vote and honest support. Vote for him, work for him, elect him, and if he betrays your confidence see to it that he becomes a political corpse forever thereafter.

May I suggest a remedy for the evils of which you so justly complain? Combine, convince the world that the expression "The farmers cannot combine" is obsolete. You have among you the material with which you could construct a bulwark so strong that no power on earth could overthrow you or again oppress you. Employ it. Educate yourselves in the matters vital to your welfare, and firmly cement the present and the future by educating your children.

As all well organized armies possess vastly superior advantages over straggling ones, so have all organized bodies of men advantages over unorganized. Of all the organizations that offer to the farmer opportunity for self improvement and political prestige, to my mind the Farmers' Club, with its centralizing power, the State Association, is pre-eminently superior. You have in these clubs social and educational advantages that you can secure in no other way. You have freedom of speech, and you have what all men and women would absolutely require for the development of their mental powers, an opportunity to measure the world's judgment of your conclusions. It is not necessary that you should be an orator or a debater, a Calhoun or a Webster, to take part in the discussions at these club meetings and to prepare and read papers on various subjects. Because you may not have received a collegiate education you need not fear to express your opinions. How many of you know

men and women who make no secret of their educational shortcomings, whose judgment in the every day affairs of life may be implicitly relied upon?

For the benefit of those who lack information in regard to the farmers' club I will say that in our State, which was the first to organize, there are three hundred or more in active operation, doing incalculable good to their supporters. The average membership is about seventy-five, although quite a number have an average attendance at their monthly meetings of 250 or more. No salaries or perquisites of any kind whatever are paid or allowed the officers of these clubs or of the State Association, their work being wholly a matter of earnest and eager patriotism in the cause of the farmer.

A few more words and I am done. We stand on the threshold of a new century. A century destined to be the most wonderful of the ages. What the coming years have in store for us we know not nor wish to know, except so far as it affects us for good, not ill. Our duty to God, to ourselves and to posterity lies plainly before us. Devotion to the one, protection to the other and a heritage of nobility for our children and our children's children, dating from the moment of emancipation from self-inflicted enslavement. The stepping stones that mark our way, and there are many between the cradle and the grave, are opportunities. Great and small they lie scattered through the years that are to come. The opportunity that offers you freedom from sordidness and selfishness, that elevates you above too close contrast with earth, revealing to you, perhaps for the first time, the beauties of that altruistic principle "Good will toward men," is chief among them all. Another bears upon its face that first law of nature, "Self protection." Enlarge upon it. Include those with whom you are affiliated, and learn to appreciate for the benefit of others the good qualities God has given you.

This is a beautiful world if you will help to make it so. Life was given you for a good purpose only. When it is done go to your reward not unmourned, not unloved, but with the blessings of that great body of noble men and women whose vocation is in accordance with divine law—the tillers of the soil.

## REPORTS FROM LOCAL CLUBS.

## GREEN OAK FARMERS' CLUB.

Several new members were received at the March meeting at the home of Mr. and Mrs. L. Stiles. The Association question was discussed. H. F. Maltby thought insurance companies might save some expense by appointing some man in each town to whom each member could send his assessment. Mr. Hunter thought members who do not attend the annual meetings should not find fault with the company. Others thought great care should be taken in insuring old buildings, since they are sometimes burned to the ground.

Our president followed with a short talk on "The Taxation of Railroads." Next meet with Mr. and Mrs. Milton Fields, April 21.

MRS. LEM POTTER, Cor. Sec.  
MANCELONA AND CUSTER FARMERS' CLUB.

Club met at the home of Mr. and Mrs. Besaw March 9, with 55 present. Wakeman Davis gave a very interesting talk on "The Annexation of Hawaii." He thought it would advance the interests of the United States. Others, however, seemed to think that annexation would be injurious to the sugar industry. The question of "Postal Savings Banks" was decided affirmatively by a unanimous vote.

Next meeting with Mr. and Mrs. W. Davis April 20.

E. D. ELDER, Cor. Sec.  
LIBERTY FARMERS' CLUB.

March meeting held at the pleasant home of Mr. and Mrs. B. W. Hill. Guy Speer gave an interesting report of the "Round-up" at Lansing. D. H. Speer spoke on "Clover." He thinks a farm cannot be run successfully without it and plaster, and that he has lost \$100 each year he has not sown plaster.

The following resolutions were adopted: While we sympathize with Cuba in her struggle for liberty, and believe the war waged against her by Spain is against the rules of civilization, and is barbarous and cruel, and that the United States, as far as it can do so in accordance with international laws, her own homes and the unnecessary sacrifice of the lives of her own citizens, should aid the Cubans in their struggle for liberty from despotic and cruel Spain, yet we believe the President is in position to better judge of when and how to act. Therefore, Re-

solved, That we have confidence in the President and his legal advisers to conduct the affairs of this government as, in its relations with other nations, in times of peace or war, in accordance with their information and ability they may decide. R. D. M. Edwards, Clara Kennedy and J. D. Crispell, Committee.

Meeting will be with Mr. and Mrs. P. Lewis the first Saturday in the month.

MRS. J. D. CRISPELL, Reporter.  
Jackson Co.

## BERLIN FARMERS' CLUB.

Our March club met at the joint home of Messrs. Warner and Groat. Principal subjects for discussion, "Rotation of Crops," led by M. N. Edgerton. Main points brought out: The fertility of the soil must be preserved; clover on corn fields is a success, pasturing the clover the first year and turning it under the second. The farmers were about evenly divided on the advisability of feeding turnips to stock.

MRS. H. L. IVES, Cor. Sec.  
St. Clair Co.

## HOLLY CENTER FARMERS' CLUB.

March meeting held at the home of Mr. and Mrs. W. H. Fagan. The continuation of the discussion, "What will be the outcome of the rapid organization of industry into trusts and combines" was animated. A few of the interesting ideas brought out were: The tendency of capital the last few years has been to organize. New trusts are continually forming. As a general rule their main object is to control the output, whereby prices can be kept up and the American people bled. The Coal, Sugar and Standard Oil trusts are examples. They have annually taken millions from the toilers above a reasonable profit. A part of these ill-gotten funds is used to corrupt legislation in order that the robbery may go on, until our whole system of government has become rotten to the core.

What shall be the remedy? It can not be by legislation, as legislative bodies are now constituted, for corporations control them all. The people must study and think of these things, and regain control of the government through their franchise. The people will win in the end. If we must have a trust let it be a government trust in which all the people are stockholders.

Oakland Co. COR SEC.

## WEBSTER FARMERS' CLUB OF OAKLAND.

Mr. and Mrs. John Wager entertained the club March 9th. It being the close of our first year, officers were elected for the year to come. The resolutions carried over from the previous meeting were discussed. In the discussion the gentlemen thought every voter should attend the primaries and see to it that good men are nominated, and make them pledge themselves, if elected, to work for the interests of the farmers, and have them understand that if they betray the confidence reposed in them they will never get a nomination again.

The following resolutions were adopted: That we, the voters and taxpayers of this club, do hereby agree that we will attend all caucuses and conventions of our respective parties and work as we never have before to nominate and elect men who will pledge themselves before their nomination that if elected they will work with a will to enforce our ideas of justice and right. That we cordially invite our brother farmers that do not belong to the clubs, with all other taxpayers, to join with us in this work, realizing as we do that we shall need all the help we can get to carry out this great reform. That there should be some way or plan by which all clubs may work together. Knowing that in union there is strength, we should all ask and work for the same object at the same time, especially with our legislature.

MRS. T. SEAMARK, Cor. Sec.  
Oakland Co.

## HIGHLAND AND HARTLAND FARMERS' CLUB.

Club met at home of H. W. Nichols, March 19th. Rainy day and bad condition of roads did not prevent a large attendance. Mrs. E. F. Wood read a paper on "Untruthfulness," and its various phases of flattery, deceitfulness, policy, evasion of a truth and silently consenting to a wrong statement. Flattery is generally used more in a selfish manner than in a harmful one, and is often used to win some personal praise or favor. Deceitfulness, though more harmful than flattery, is more often justifiable, as imprudent questionings sometimes deserve misleading answers. Much has been said about various classes evading taxation, and legislatures have been censured for the farmers' taxes

being so high, but they are personal grievances, magnified by being thought about and discussed. Is not the farmer guilty of evading a truth, when his worldly possessions, of which he may justly feel proud, seem to dwindle till they are hardly worth assessing when the supervisor pays his annual visit? It is a good saying that when you are beaten by a man once, shame on him; but when you are beaten by him twice, shame on you. Candor is a virtue for which we pay most dearly.

Rev. Schermerhorn read a paper entitled "Protection to agriculture." He thought that farmers should assert their independence and if the old parties did not give them what they want, organize a new one and vote for men who will see that laws are enacted in justice to them. He predicted that the time will come when we will be reduced to peasantry unless it is averted in this way.

"How can our fire insurance companies be improved?" was discussed. It was thought that some companies allow too high a valuation on property and do not re-assess often enough. Also that all who insure should ascertain if the company is licensed to do business in this State. A set of resolutions was adopted endorsing Gov. Pingree in calling the extra session and instructing our representatives to work for equitable and just taxation of corporate and private property. Copies will be sent to each representative from this district.

Next meeting will be held with Mrs. Eliza Tenny, April 16th.

Oakland Co. SYLVIA GAUNT, Cor. Sec.  
MILFORD FARMERS' CLUB.

March meeting held at the G. A. R. hall on the 2d inst. with a very large attendance. An invitation was received to attend a joint meeting at Wixom, March 9th, and to furnish a part of the program.

Question, "Resolved, that the present law awarding damages against railroads, corporations and individuals for accident is unjust," was opened by Mr. Renwick, followed by others. It was thought that the present law is as good as we can have. Mr. Lovewell thought the laws in this respect are just and we should enforce them. By these laws people are more careful. Others gave instances where they thought the law unjust.

ALICE I. MCCOLL, Cor. Sec.  
Oakland Co. HAMPTON FARMERS' CLUB.

At the club meeting at the residence of Mrs. L. G. Fish, on the 24th inst., John Van Poppen read a paper, entitled, "Should Farmers Build Roadside Fences?" The appearance of the farm, he thought, would be improved by removing them. They hold the snow in winter, thus causing blocked roads. The saving in fence building would more than repay any loss from stray stock.

In the discussion of the Association question on Farmers' Mutual Fire Insurance Companies, these were suggested: First, capable and honest officers. Second, grading and classifying risks according to quality of buildings and the hazard. Third, the insertion of a rebuilding clause in the policies. Fourth, annual assessments in advance, as per careful estimates of probable losses. J. H. Sharpe conducted a class in civil government, subject, "Township Office."

Bay Co. JOHN EGAN, Cor. Sec.  
VASSAR FARMERS' CLUB.

Club entertained at the home of Mr. and Mrs. Larabee, March 17. It was the largest meeting yet held—125 in attendance. The Association question was discussed by Association Secretary C. M. Pierce. He thought these companies had been a great success throughout the State. Failure only has come after great neglect by those most interested. Keep posted on the by-laws and attend the annual meetings. Let the clubs send delegates to the annual meetings. Hon. B. W. Huston thought these companies had proved an expensive luxury. However, he thought the one in Tuscola County at present reasonably safe under existing management. Favored the old line companies. Mr. Livingston read the annual statement of the Tuscola County Mutual, showing that the expenses had been materially reduced.

"Farm Dairying; Does It Pay?" was answered by Messrs. DeGraff and Ridgeman. These men have made a success of keeping cows and know whereof they speak. Both agreed that with good cows, well fed, warm stables and gentle treatment it does pay. Mr. DeGraff favored Jerseys. Mr. Ridgeman favored a large cow, but thought there

were good cows of all breeds. He thought farmers should raise their own cows. Had bought few and sold many. W. T. Lewis thought farmers should weigh their own milk and thus determine which cows are profitable. By this means he had found that the cows he thought the poorest were sometimes the best. Mrs. Wm. Perry read an excellent paper, entitled, "The Farmer Leads the Way," which was well received. "Sugar Beet Culture" was discussed. The ideas were suggested that expense of raising and marketing would leave little profit; that it would be a good way to bring up the fertility of the soil; the refuse is good feed; if bulletins are secured and read it could be made to pay.

The proposed railroad legislation was heartily indorsed. Owing to the removal of the corresponding secretary a new one was elected for the balance of the year.

Tuscola Co. M. L. L., Cor. Sec. A NEW CLUB.

Some of the farmers of Novi township met in the town hall March 19 and organized a farmers' club, to be known as the Novi Farmers' Club. The officers are: President, George Yerkes; vice-president, H. H. Ingersoll; recording and corresponding secretary, Mrs. S. C. Taylor; treasurer, E. D. West. A committee was appointed to draft a constitution and report at next meeting, April 30. The secretary read a resolution supporting Gov. Pingree in his attitude towards the railroads; also asking our senator and representative to vote for the bill to be reported to the house by Gov. Pingree, making railroads pay their just share of the taxes. Quite a discussion followed, but it was all one-sided. The resolution was passed and copies were sent Gov. Pingree, Senator Warner and Representative Kimmis.

Oakland Co. S. C. TAYLOR, Cor. Sec. SALINE FARMERS' CLUB.

At the March meeting the following resolutions were unanimously adopted: That it is the sense of this club that Mutual Fire Insurance Companies should resurvey the property insured every five years, employing a disinterested expert to do the work. That this club disapproves of State appropriations for Farmers' Institutes.

Washtenaw Co. A. A. WOOD, Cor. Sec. SOUTH JACKSON FARMERS' CLUB.

One of the most successful meetings of the year was held with Mr. and Mrs. Jason Hatch, March 25. The chief topic of discussion, "Corn and Its Culture." Robert Tygh: Select for seed the ears that ripen first and dry them thoroughly before cold weather. Plow deep; work ground till mellow and fine; plant three kernels in a hill, four feet apart each way. As soon as corn is up make surface rough by deep cultivation, thus protecting plants from cold winds and allowing sun to warm the surface of the soil. If the ground is wet such a surface will let the surplus moisture out, and if dry will retain what there is. Don't cultivate after July 4, since the brace roots are formed by that time. Cultivate deep and often up to that time. If the work is thorough to that time there will be no trouble with weeds. He raises from 80 to 110 bushels to the acre by this method. George Hatch would plow from seven to nine inches deep on ground to be followed by wheat, and favored shallow cultivation. H. M. Eddy: Very particular about plowing. If done properly from one and one-half to one and three-quarter acres is a good day's work. Plows seven and one-half inches deep. Shallow cultivation at first, deeper afterward. The last can't be too deep. Mr. Hammond: Two kernels in a hill, three and one-half feet apart. Use the old-fashioned one-horse cultivator. D. Goldsmith: Not much. Should have a two-wheeled cultivator, with a cushion on the seat and an umbrella to keep the sun off. Deep cultivation a success. C. H. Goldsmith: The steel harrow is the tool of the future. It saves not days, but weeks.

Mrs. Anna Kipp read an excellent paper on "Who works the harder, the husband or the wife?" If both do their duty there is no difference, seemed to be the general sentiment.

The following resolutions were adopted: That we are opposed to a State manager of Farmers' Institutes and are in favor of the County Institute Association managing their respective County Institutes.

C. H. Goldsmith, delegate to the "Round-Up" at Lansing, reported at this meeting. He was enthusiastic in praise of the beauty of the Agricultural College and grounds and of the courtesy of the instructors and the students. Is afraid that many of their

experiments are not practical, as we every-day farmers cannot have stables lighted by electricity, and many of us don't know the meaning of carbohydrates, protein and such terms.

Next meeting at the home of Wm. Hutchins, April 29.

HELEN M. CARPENTER, Reporter. Jackson Co.

FENTON AND ARGENTINE FARMERS' CLUB.

Club met March 5 at the residence of L. C. Lainig. The hostess read a paper on "Butter-Making." The Association question on Farmers' Institutes was further discussed at this meeting and a resolution passed favoring the discontinuance of the State appropriation for the purpose of maintaining them. The resolutions passed by the State Association were then read and all passed upon favorably. "Farmers' Mutual Fire Insurance Companies" will be discussed at the next meeting, April 2, at the residence of Henry Whitney.

Genesee Co. EDWIN PRATT, Sec.

HOWELL FARMERS' CLUB.

The March meeting at the home of Mr. and Mrs. E. E. House was the most largely attended in the history of the club, there being nearly 150 present. The following resolution was adopted: That we are opposed to the present management of Farmers' Institutes and also to any further appropriation for an institute fund. The Association question was considered. As to the division of the insurance money between the mortgagor and mortgagee, the prevailing opinion seemed to be that that should be settled by them at the time of giving the mortgage. The club was also opposed to any discrimination between property that is mortgaged and that which is not.

MRS. R. R. SMITH, Cor. Sec. Livingston Co.

CONCORD FARMERS' CLUB.

This club met March 12 at the home of Mr. and Mrs. E. C. Hungerford. President Mrs. Ida Goodrich has the honor of being the first lady president the club has ever had. Four new members were admitted. Association question opened by H. E. Dewey. He thought nine out of every ten thoughtful farmers get insured; that all members should attend the annual meeting; that all property should be inspected and re-insured every five years. He favored the Pulaski Mutual Fire Insurance Company plan as the cheapest and least liable to incendiary fires. Various opinions by different members followed, the majority favoring the Pulaski Company's plan.

The club next meets with Mr. and Mrs. T. O. J. Thatcher, April 9.

MRS. MAGGIE M. BARTELL, Jackson Co. Reporter.

WOODSTOCK FARMERS' CLUB.

March 19 the club met with Mr. and Mrs. N. Osborn. It was decided to join the Lenawee County Association of Farmers' Clubs. The club disapproved of the petition received requesting aid in securing the substitution of an appropriation of \$25,000 per year for a "Bureau of Plant Introduction" and of \$100,000 per year to extend the use of the corn crop, in place of the regular appropriation for "Free Seed Distribution."

Horace Wilcox read an interesting and instructive paper, telling of the journey of two students, who in 1889 started to encompass the globe on bicycles, of the manners and customs of the people of the different countries through which they passed, how in some places they were cordially welcomed, while in others their lives were in jeopardy, and how on the Fourth of July, 1890, they reached the summit of Mt. Ararat and there unfurled the glorious Stars and Stripes.

The club question, "Who does the most towards paying the mortgage, the husband or the wife?" was duly considered and it was decided that the wife does her full share in keeping up her end of the work. The Association question was fully discussed, with the following result: Resolved, That the constitution and by-laws of the Farmers' Mutual Insurance Company, of Lenawee County, be so amended as to simplify the workings of said company, with a view toward curtailing the expenses of the officials of said company, and to the return to the plan of the Zach. Cook administration. That no officer shall hold office more than two years.

We next meet with Mr. and Mrs. Horace Wilcox on April 16.

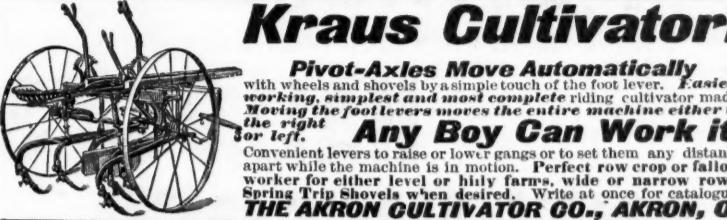
MRS. J. H. TRUMBLELL, Lenawee Co. Club Reporter.

A SLIGHT COLD, IF NEGLECTED, OFTEN AT- TACKS THE LUNGS. "Brown's Bronchial Troches" give immediate and effectual relief.

# A RUBBER. ST. JACOBS OIL FOR SORENESS AND STIFFNESS.

It cures in  
two or three  
vigorous rubs.

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Pivot-Axes Move Automatically  
with wheels and shovels by a simple touch of the foot lever. Easiest  
working, simplest and most complete riding cultivator made.  
Moving the foot lever moves the entire machine either to  
the right or left.  
Convenient levers to raise or lower gangs or to set them any distance  
apart while the machine is in motion. Perfect row crop or fallow  
worker for either level or hilly farms, wide or narrow rows.  
Spring Trip Shovels when desired. Write at once for catalogue.  
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	ANALYSIS.	Per cent.	Per cent.	Per cent.	Per cent.
Pure Raw Bone Meal	22 to 25	4 to 5	.....	\$22.00 per ton	
Scientific Corn & Grain Fertilizer	9 to 10	2 to 3	2 to 3	16.00	"
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WANTED RELIABLE MEN in every locality, local or traveling, to introduce a new discovery, and keep our show card tacked up on trees, fences and bridges throughout town and country; steady employment, commission or salary; \$65.00 per Month and Expenses, not to exceed \$2.50 a day; money deposited in any bank at start if desired; write for particulars.

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TOP BUGGY FOR \$22.75  
Also COLUMBUS BUGGIES for \$29.90, Road Wagons, \$16.50; Phatons, \$27.50; Surrays, \$42.70. You don't pay for them until after received. Everything in Buggies, Carriages, Harnesses and Saddles in our Free Vehicle Catalogue. Send for it.

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COMMENCING JULY 5th, AND CONTINUING FOR 8 WEEKS.

Courses of lectures, covering seventeen subjects in the law, will be given by members of the Law Faculty of the University. For detailed statement of courses and tuition address E. F. JOHNSON, Secretary, Ann Arbor, Mich.

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a portable saw mill and

powerful traction engine; also several good farms on liberal terms. Address F. A. SESSIONS, Ionia, Mich.

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Good soil and buildings; living water; right for stock. Near station on R. R., school and church. Terms easy. Address J. B., care of C. O. THOMPSON, Ionia, Mich.

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# Farmers! One Question!

In view of what it has done for others, can you afford to go through another season without

# HALLOCK'S SUCCESS ANTI-CLOC WEEDEER and CULTIVATOR

## READ THE TESTIMONY:

Messrs. D. Y. HALLOCK & SON, York, Pa.

Gentlemen—Last season I used one of your Success Anti-clog Weedeers. Bought it of my brother, R. H. Jones, and I wish to let you know how much pleased I am with the Weedeer. One of my neighbors was afraid to buy, but he was not afraid to borrow. He borrowed mine and said he went over his turnips with it and was very much pleased with the Weedeer and the good work it did.

For myself I can say a great deal of my corn—never saw a hoe in the field during the entire season. One piece I planted a little too thick; so when it was about one foot high I wished to thin it out, so it would ear better. So I took the Weedeer and started in; went lengthwise and crosswise, and every other way that I could drive my horse, thinking it might break off some of the stalks; but I can safely say that I did not break off two stalks in the whole field.

Before I had commenced to use my Weedeer many of my neighbors thought that it would tear up the corn and potatoes. But after they had seen me give it this thorough trial they were convinced that it would not harm the corn in the least.

The fact is, I am sure the Weedeer will not injure any crop grown on the farm. It is very important, however, that the Weedeer be started early. If the weeds are allowed to get a good start the Weedeer will simply cultivate them, as it does the crop.

Yours truly, W. R. JONES.

CENTER, N. Y.

Messrs. D. Y. HALLOCK & SON, Gentlemen—How about the price of your Weedeer for the coming season? Is it the same as last year? I intend to sell quite a good many. I used the Weedeer I purchased of you last year on everything I raised, including even onions, and it worked to perfection on everything. I can honestly say I would not be without it for \$50, if I could not get another just like it.

Yours truly, T. B. NICHOLS.



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Beware of  
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The first order from your town will secure special price and agency.

Write for full information. Be sure to give name of County. D. Y. HALLOCK & SON, Box 806, YORK, PA.

Messrs. D. Y. HALLOCK & SON, York, Pa.

Dear Sirs—I intend to sell just as many Weedeers as I can this Spring. I bought one last Spring for my own use and they are certainly a complete success, and I would not think of farming without one. Last Spring, in April, I contracted to cut and haul to the saw mill a lot of lumber; so I took all my men away, leaving only my fourteen year old boy on the farm. Now, I will tell you what he did. He took the entire care of thirty-five acres of corn and twelve acres of potatoes, working both crops entirely with the Weedeer, and I never saw a finer crop in my life.

The secret of Success in using your Weedeer is to start it early, before anything grows, and keep the soil stirred so no weeds will grow. No farmer can afford to farm without a Weedeer, and all will own one just as soon as they realize its value.

Yours truly,

HEZEKIAH GONGAMERE.

IRWIN, PA.

MORLEY, Mich.

Dear Sirs—Your favor of recent date, wishing to know if I am going to handle the Success Anti-clog Weedeer the coming season received. I certainly am if you will permit me to, and I intend to push them for all they are worth.

I let my Weedeer go wherever the farmers wanted to try it, and they all pronounced it a grand success; declared that it did fine work. The Weedeer that I kept for my own use I would not take \$20 for if I could not get another just like it.

I sold one Weedeer to a neighbor near by very late in the season, and I will tell you what he did with it. He planted one acre of potatoes quite late, and he tended them entirely with the Weedeer until he went to hill them up, and spent but five hours work all told on the acre of potatoes. He told me he kept the time carefully that he spent in cultivating them. Said he started the Weedeer before they were up, and went over the potatoes frequently.

Yours truly, J. W. HARDIN.

RUSSELLVILLE, Ark., December 24th, 1897.

"I had the best of success with the Success Anti-clog Weedeer and Cultivator. I can truthfully say that I never used a tool that equalled it in young cotton and corn. I saved half of the hoeing and plowing by running the Weedeer. I beat all my neighbors raising corn, and equalled any of them in producing cotton, with half the expense. Several neighbors say they want one. I want the agency for Pope and Yell counties, not just for 1898, but until all the farmers get one. They will all be sure to buy sooner or later."

B. H. ALLEN.

RUSSELLVILLE, Ark., December 24th, 1897.

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**HAY RAKE**  
Means  
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It leaves the hay in a light, loose windrow, where it is cured by the action of the air, and not bleached by the sun; hay retains its bright green color and all the essential oils.

It turns the hay. Completely, It turns it all the time; you can begin making quickly and clean. It saves the use of a tedder in many instances, saves time; does not gather stubble, manure or other trash. It greatly reduces the cost of harvesting a crop of hay. More about this and the Keystone Hay Loader in our free circulars. Write for them.

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The simplest mower com-  
mensurate with good  
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No Side Draft—the  
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Better ask for our catalogue, embracing  
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which tells all about the best and most economical ways of making, handling and applying farm yard manure and incidentally about

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It spreads all kinds of manure cheaper and better than can be done by hand. **Has Stood the test 18 years.** The machine is greatly Improved for 1898. We send the book FREE on application.

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Flower and Vegetable Seeds  
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We make Steel Wheels to fit any size and width tire. Staggard and Straight Spoke. Will not rot or dry out. We also manufacture Steel Handy Wagons. Catalogue free.

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that is everybody who has any knowledge of the subject—that the **STAR DRILLING MACHINES** are the most rapid, strong and durable machines made. Over 100 unsolicited testimonial offered in proof of this claim.

Here are some of the reasons. No springs

are used, the machine is more stable and more

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